



Telegraphic Address : " TRAZETTE PARL., LONDON "
Telephone No.: WHITEHALL 9233 (12 lines)

Branch Offices:
GLASGOW: 87, UNION STREET
Telephone: Central 4646

NEWCASTLE-ON-TYNE: 4, ROYAL ARCADE, PILGRIM STREET
Telephone: Newcastle-on-Tyne 22239

MANCHESTER: CENTURY HOUSE, ST. PETER'S SQUARE
Telephone: Central 3101

BIRMINGHAM: 81, EDMUND STREET
Telephone: Central 3049

Annual subscription payable in advance and postage free
British Isles and Abroad £2 6s. 0d.
Single Copies One Shilling
Registered at the General Post Office, London, as a Newspaper

VOL. 90 No. 9

FRIDAY, MARCH 4, 1949

CONTENTS

	PAGE
Editorial Notes	225
Commons Debates Transport	227
Double-Deck Railway Carriages	227
Through Great Central Eyes	228
Standardisation in Excelsis	229
Letters to the Editor	230
The Scrap Heap	232
Overseas Railway Affairs	233
Further G.I.P.R. Coaching Stock with All-Metal Bodies	235
Reorganisation of Acton Works	237
Personal	243
Experimental British Double-Deck Train	245
Great Northern Railway Company (Ireland)	247
Parliamentary Notes	248
Railway Students' Association Dinner	249
Notes and News	250

DIESEL RAILWAY TRACTION

The March issue of this RAILWAY GAZETTE publication illustrating and describing developments in Diesel Railway Traction, is now ready, price 2s.

BRITISH TRANSPORT DIRECTORY OF OFFICIALS

For reference purposes "The Railway Gazette" has compiled a list of members of the Ministry of Transport, the British Transport Commission, the Railway Executive, the London Transport Executive, the Road Transport Executive, the Docks & Inland Waterways Executive, and the Hotels Executive, together with their principal officers, so far as they have been announced.

PRICE ONE SHILLING

THE RAILWAY GAZETTE

33, TOTHILL STREET, WESTMINSTER, S.W.1

Civil Service and Railway Salaries

In our February 25 issue we commented on the report of the Chorley Committee which has advised a general improvement in Civil Service administrative class salaries. We pointed out that the effect of nationalisation has been to put railway officers in a considerably less fortunate position than Civil Servants. It is not clear what, if any, will be the reactions of implementing the Chorley Report on the salary standards in public and nationalised undertakings. The proposed scales are in excess of those which, it is understood, the British Transport Commission is seeking to establish for new appointments, and in some quarters there is a feeling that the B.T.C., which controls salaries over £1,750, is inhibiting salaries of the order that would have obtained in the former undertakings. Suggestions have even been made that the Minister of Transport has advised the British Transport Commission to keep salaries below the level which existing senior railway officers and senior administrative technical staffs have been accustomed to expect.

* * * *

Basic Differences in Employment

In existing circumstances it may be argued logically that there is good reason for establishing some relativity between salaries in the Civil Service and in the nationalised undertakings. At the same time, it cannot be overlooked that there are very real differences which favour the former in their conditions of employment. Regard must be had to the very favourable Civil Service non-contributory superannuation; these arrangements are equivalent to an additional one-fifth of salary. Moreover, scales of leave, both annual and in respect of sickness, are double those general on the railways. The Civil Servant, too, has rather more than a reasonable expectation that success in his department will be marked by the bestowal of a knighthood or other honour; these are awarded very sparingly to railwaymen. In any event, there are many railwaymen who feel that it is unjust that nationalisation should deprive railway staffs of the prospects and salaries to which they have long entertained expectation, and that the lowering of salary ceilings should apply to new entrants to the service. Although that course might be more compatible with justice, it involves a number of practical difficulties.

* * * *

Great Northern Railway (Ireland)

Lord Glenavy, Chairman of the Great Northern Railway Company (Ireland), had a gloomy story for his stockholders at the annual meeting last Friday. Not only was there a deficiency in net earnings for 1948 of £72,454, offset by non-recurring windfalls, but the financial position has become so straitened that it has been necessary to deplete investments and cash. Moreover, commitments for capital developments will leave little or nothing in the investment portfolio. The decline in the railway's fortunes has been brought about by extraneous influences, beyond the control of the company, and it now seems likely that its only future must lie in fusion with other transport agencies in Ireland. When reconstitution of Coras Iompair Eireann (the Irish Transport Company) has been decided, it seems likely that, following the general line of the Milne report, there will be proposals for the acquisition of G.N.R. holdings. Lord Glenavy said that the G.N.R. board had been invited to comment on the Milne report as it affected the railway. A report of the meeting is given on page 247.

* * * *

Co-ordinating Charges in Argentina

As a result of the deliberations by the special commission appointed to co-ordinate transport rates throughout the country, a single tariff book has been issued for use on all the Argentine railways. According to our contemporary, *The Review of the River Plate*, the new rates contained in the book have been applied as from February 1. The book replaces 19 "classifier" books formerly in use, and it is claimed that the structure and application of railway rates throughout the country is being made uniform and simple. All special tariffs have been eliminated in favour of basic rates. These basic rates are "parabolic," which means that the cost per ton-mile decreases

as the distance increases. It is also suggested that the new rates are to form the basis for the establishment of charges for other forms of transport, and it is claimed that the new tariff system will cover total operating cost and provide a reasonable return on the capital invested. This seems to suggest that the cost of transport has been greatly increased, for it is not long since Senor Miranda said that traffic receipts would have to be practically doubled to achieve this end.

* * * *

Overseas Railway Traffics

A £826,750 increase in Canadian National Railways operating revenues during January was not sufficient to counteract a £1,058,500 advance in operating expenses, and the resultant deficit in net revenue was £372,000. Operating revenues were £9,327,250 and operating expenses £9,699,250; the net deficit was £231,750 higher than during the corresponding period of 1948. Great Western of Brazil traffics for the fortnight ended February 19 amounted to £84,200, as compared with £75,000 last year, so that the decrease in aggregate receipts has been brought back to £6,000, with a total of £297,400 for the current seven weeks. Following a total setback of £18,139 in the fortnight under review, Leopoldina receipts for the first seven weeks of 1949 were down by £79,711. Traffics were £48,747 and £44,070, and, on the aggregate, amounted to £342,329. During the week ended January 29, South African Railways receipts were £1,405,312, compared with £1,305,806 for the equivalent period of 1948, and the total advance in receipts since April 1 now is £3,593,220, at £58,523,214.

* * * *

Railway Wage Claim Hearings

Last week the National Arbitration Tribunal rejected the claim by the N.U.R. for a wage increase of 12s. 6d. a week for all catering and hotel workers employed by British Railways. Something like 16,000 workers are involved. This is the first decision on the four claims put forward by the union at the same time and referred to in previous issues. Also, this is the only claim being dealt with by the N.A.T., for the reason that no machinery exists within the railway industry for dealing with the Hotels Executive side of the dispute. Hearing of the claim by London Transport workers began on March 3 and is being dealt with by a Wages Board of which Lord Terrington is Chairman. Hearing of the claim by the main grades of railway workers will be begun by the Railway Staff National Tribunal on March 7 and the meetings will be presided over by Sir John Forster. The first business of this Tribunal will be to decide whether or not its proceedings shall be in public. As the claims are being heard separately by different arbitrating bodies it does not necessarily follow that rejection of the claim by the Hotels Executive will be followed by rejection of the claims put forward by other workers.

* * * *

American Wagon Loadings

In the United States the weekly statement of wagons loaded with revenue freight serves in some measure as a trade barometer. Figures for the five weeks to February 5 show that the railways have started the year badly. They have forwarded 357,000 fewer loaded wagons than in the corresponding period of 1948, or 9 per cent., and 557,000 under 1947, or 13·6 per cent. Less-than-wagon-load traffic has decreased at an alarming rate—11 per cent. below 1948 and 23 per cent. below 1947 in the week ended January 29. There was a time when one in every four loaded wagons carried "smalls"; for that week in January the proportion fell to one in 13. Severe storms in the western states account in part for the drop in wagon loadings, but the persistent downward trend of the weekly figures may be a sign of some slackening in business activity. At the present juncture that would be almost as serious a matter for this country as for the United States, and we look forward with some anxiety to the announcement by the Association of American Railroads of details for the last three weeks in February. Our anxiety is not lessened by a reduction in January of nearly 10 per cent. in the number of loaded wagons forwarded by the Canadian railways.

Rolling Stock Overhaul at Acton Works

The overhaul of rolling stock operating on the London underground group of railways, originally was effected in repair shops situated at the various constituent companies' running depots, and cars were dealt with when the inspection staff considered it necessary, rather than on a time or mileage basis. As the system grew, however, it became necessary to provide additional repair shop accommodation, and the natural solution was a single depot for all periodic overhaul. Since the central overhaul depot was opened at Acton in 1922, there has been considerable extension and modification of the original layout, notably that approved in 1936, after the formation of the L.P.T.B., when the works accepted responsibility for rolling stock of the former Metropolitan Railway. Though the extensions authorised in 1936 were completed before the war, work on the rearrangement of existing shops was discontinued until the end of hostilities, when, in the light of fresh experience, various modifications were made to the original plan. The recent completion of extensive alterations to the car-body and reconstruction shops marks an important point in the plans for the reorganisation of Acton Works, and further reference to the subject is made in an illustrated article, which appears on another page of this issue.

* * * *

"Milepost 100" on the Burlington

The Chicago, Burlington & Quincy Railroad—familiarly known as the "Burlington"—has brought out an illustrated booklet entitled "Milepost 100" to commemorate its centenary this month. On February 12, 1849, authority was given to build a 12-mile line from Aurora to join the Galena & Chicago Union Railway, and from this grew up several lines which in 1864 combined to form the 400-mile C.B. & Q. system, one of the most progressive of the period. By its own extensions and by lease or purchase, the mileage of the Burlington grew to 7,661 by the end of the century, yet so prudent was its management that in 1901 total capitalisation was only \$29,000 a mile, or almost the same as in 1864, whereas the average for all railways in the U.S.A. exceeded \$49,000. Efficiency, stability, and progress still characterise the Burlington and derive from its "heritage of good management and sound precept"—to quote a contributor to our American contemporary, the *Railway Age*. In 1934, the Burlington introduced the first American diesel-hauled streamline train, which was the forerunner of the "Zephyr" services, and more recently it produced the first dome coach, sufficient evidence that it is still in the forefront of railway progress. It has been fortunate in its Presidents; its present Chief, Ralph Budd, who came from the Great Northern (U.S.A.) in 1932, successfully brought the company through the depression years and the war to the enviable position it holds today in American transport and business.

* * * *

Welded Locomotive Boilers

By the end of 1948 the railways of North America had a total of 69 locomotive boilers in service with fusion-welded shells, and opinion was unanimous that these boilers are standing up admirably to service conditions. The oldest of them is one put in service by the Delaware & Hudson Railroad in September, 1937; during ten years and eight months, through which it has run 452,300 miles, this boiler has needed no work on the shell, nor has it shown any sign of weakness. A second and larger welded boiler entered service on the same railway, with radial-stayed wide firebox and a barrel of three rings; this also, after 82,500 miles, covered in 18 months, has shown no weakness. The Chesapeake & Ohio and Chicago & North Western both have five all-welded boilers in service, carrying steam at 300 lb. per sq. in. pressure, the former with domes and the latter without. On the New York Central there is one all-welded boiler with welded-on dome, designed for 280-lb. pressure and actually working at 265 lb., which has been in service since December, 1946; also there are 24 boilers of shorter service with welded barrels and front tube-plates, all without domes; 10 more of the latter, but with domes, are on order. Of ten all-welded boilers on the Chicago, Milwaukee St. Paul & Pacific four

only have gone into service as yet, one of which has made 66,000 miles in 11 months. In addition, the C.P.R. has two welded boilers which were shopped for general repairs after running 119,162 and 115,064 miles respectively, but after very thorough inspection disclosed no weakness.

Commons Debates Transport

ALTHOUGH it has been made clear that Members of Parliament cannot now expect answers to questions in the House of Commons on matters appertaining to the day-to-day administration of the British Transport Commission and its Executives, members of all parties share an apprehensive interest in nationalised transport. When the British Transport Commission Bill, which is a general purposes measure, came up for second reading in the House of Commons on February 22, the debate ranged over a wide field. It was the first Private Bill to be brought forward in the Commons on behalf of a nationalised industry, and the Speaker ruled that matters of fares, administration, and so forth, would be in order for discussion. Over a dozen members took part in the debate, and among the matters touched on were the decline in receipts, staff matters, the level of fares, punctuality, and amenities at stations. By far the greater part of the discussion affected railways.

The Minister of Transport, in his reply, could hardly have been expected to have dealt comprehensively with so many widely varying facets of transport. He confined himself to commenting somewhat broadly on a selection of the matters raised. In reply to criticisms of shortcomings, he thought that perhaps Parliament and the public were not sufficiently appreciative of the recent history of the railways, or took sufficiently into account the fact that the nation had completely subordinated railway affairs, management, and interests to national requirements during two wars, particularly the last.

He was not on such good ground, however, when he went on to say that previous Governments had made no arrangements and no financial provisions to enable whatever railway management emerged after the war to achieve its price levels with the moving price levels in the community. The original Railway Control Agreement contained clauses providing for the adjustment of railway fares and charges in accordance with the level of labour and material costs. There was the means for adjusting charges to costs in the final control agreement, and, indeed, Mr. Barnes himself used this machinery before the end of the control agreement.

Nor was it particularly fortunate to give the argument a political twist by saying that, although the price of coal, timber, steel, and all the major requirements of the railways had been rising steadily throughout the war, the Government had done nothing to meet that situation, nor had it allowed the railways to keep rolling stock and permanent way up to a state of efficiency. It was not financial or any similar inability which prevented the railways maintaining their assets at the level they would have wished. Mr. Barnes cannot have forgotten that the control agreement made provision for a trust fund to look after moneys which could not be used for maintenance during the years of scarcity; it was shortage of supplies and labour that prevented normal maintenance being carried out. When the railways were taken over this fund stood at £150 million.

To the recurring notes of disquiet in members' speeches as to the financial position of the British Transport Commission, Mr. Barnes merely reiterated that the adjustment of fares and charges would have to wait for the charges schemes which the British Transport Commission has under consideration. He gave no indication that he was considering using his interim powers in this matter, and discouraged any expectations of an early change in railway fares or charges.

He met criticism of the intention to reduce staff by saying that the railways had been through the experience of any big organisation and had had to replace men called to the forces by temporary personnel. There was now a certain amount of redundancy, which he thought the Commission was handling with due consideration of all the circumstances involved. He thought that the total number employed in transport was more than necessary; actual numbers of reductions were subject to discussion with the trade unions.

Double-Deck Railway Carriages

AS a means of increasing the carrying capacity of suburban trains, without lengthening platforms, the possibilities of double-deck rolling stock have been considered in many parts of the world. The use of such stock has never been extensive anywhere, and, in fact, no double-deck passenger vehicle has ever been operated so far in Great Britain. Interest in the subject has revived as a result of the reference to a proposed double-deck railway coach for the Southern Region of British Railways, which was made towards the end of last year to the British Association by Mr. O. V. Bulleid, Chief Mechanical Engineer. One experimental double-deck carriage has been built at Lancing as a prototype, and it is reported that this will be tried out in South-East London later this year. It is intended to increase the seating capacity of an eight-coach train from 840 to 1,016. A full-size facsimile of what one compartment will look like when completed was exhibited by the Railway Executive last Friday.

Double-deckers were used by the Baltimore & Ohio Railroad more than 100 years ago, but their more extended adoption, chiefly for heavy suburban traffic, dates from the spread of various large cities in the 80s. Before that time, however, the heavy native traffic in parts of India had resulted in the use of double-deck carriages there. The first of which we have a record was in 1862 on the Bombay, Baroda & Central India Railway, where the rather simple type of double-deck carriage was found to be popular with the natives and economical for the company. Such vehicles were introduced also on the Lahore to Amritsar section of the Punjab & Delhi Railway (afterwards the North Western Railway) in 1864.

The earliest "modern" use was on the old Western Railway of France in 1879, where they were adopted for Paris local services to avoid lengthening of platforms. This railway, which later became the Etat, and is now part of the French National Railways, has continued in its use of double-deckers, and built an improved type in 1899. Shortly afterwards, Berlin took a similar step, and before the recent war there was a handsome model in the Verkehrs-und Baumuseum in Berlin of a double-deck carriage as used on the Stadtbahn. This carried on one of the longitudinal beams of the frame the inscription "last overhauled on 4.10.1911." We believe that such vehicles were last used to convey Berlin workmen between Grünwald and Westend. The main use of these double-deckers, however, was from 1880 to 1900, when they were employed, along with ordinary type carriages, on such services as those of the Berlin-Ringbahn, chiefly in rush hours, as the platforms were too short to accommodate longer trains.

Double-deck carriages were also used on the Altona-Kiel Railway, where, as in Berlin, the floor was dropped abnormally low down and extra wide footboards were provided for the lower deck, to facilitate entering and alighting. The springs were arranged under the axle boxes. In addition, double-deck carriages were used on the former Prussian Light Railway from Offenburg to Frankfort (Main) from 1880 to 1905 or 1906; and on the old Hessischen Ludwigsbahn, or Riedbahn, between Frankfort, Biblis, and Mannheim until 1907, and until 1895 on the local section between Goldstein and Frankfort also. Incidentally, the Hessischen Ludwigsbahn used an interesting Thomas double-deck steam railcar in 1880. Denmark, also, used double-deck vehicles for the Copenhagen suburban services about the same period.

Within recent years, double-deckers have been used on the Paris suburban lines of the former Est and Etat; from and to New York on the Long Island Railroad in the U.S.A.; on the Lübeck-Büchen Railway (from April 7, 1936); and (experimentally) on the South African Railways. All these are standard-gauge lines with the exception of the South African Railways, and the last-named provides the only example we can recall of the use of a double-deck carriage on the 3-ft. 6-in. gauge. Only one such vehicle was built, and this seated 128 passengers (compared with 86 in an ordinary South African coach) within a height of 12 ft. 7 $\frac{1}{2}$ in from rail level, but was soon withdrawn from service because of its unpopularity.

All the double-deck coaches built last century had two self-contained decks and were reasonably popular for suburban service, being virtually double-deck buses or trams on rails, but their use was confined to a few routes because of their great height from rail level. All double-deckers designed this

century, apart from the Lübeck-Büchen train, have used the mezzanine floor arrangement, as shown by the illustrations on page 241, and, even so, they have all exceeded the British loading gauge, with the exception of the South African unit, which had a well between the bogies. The new French-coaches, for example, are 14 ft. 3 in. high from rail level, and even the Lübeck-Büchen articulated unit (which is only 8 in. above the track at its lowest point) is 14 ft. 2½ in.

The double-decker, particularly within the restricted British loading gauge, is but an expedient, and is never likely to prove a popular method of travelling. Whatever arrangement of seats be adopted, it must necessarily delay loading and unloading, and the mezzanine floor or interlocking of the seats on two levels, gives very low headroom. With the new British design, which in many respects is a triumph of ingenuity on the part of Mr. O. V. Bulleid, close clearances of bridges and tunnels have necessitated the windows of the upper deck being fixed, and experience of the acute congestion during peak traffic periods leads us to feel that ventilation will prove a problem, despite electrically-operated fans in the upper part of the compartment.

* * * * *

Through Great Central Eyes

CONSIDERING the comparative nonchalance with which the general public accepted the nationalisation of almost the entire British railway system, it is not surprising that few echoes of popular wonder and admiration at the opening of Marylebone Station reach us from fifty years ago. The Great Central Railway was over half a century too late for its London main line to inspire comparisons with the Pyramids of Egypt, like the London & Birmingham, or even for Marylebone, while under construction, to be termed "a highly interesting object," like the viaduct of the London & Greenwich. To find enthusiastic appreciation of the enterprise it is more rewarding to go to the publications of the Great Central Railway itself, notably to an illustrated album published about 1900, which asserted with reference to the London extension that no company before had ever "staked its all so heroically and so justifiably to fulfil an acknowledged national need."

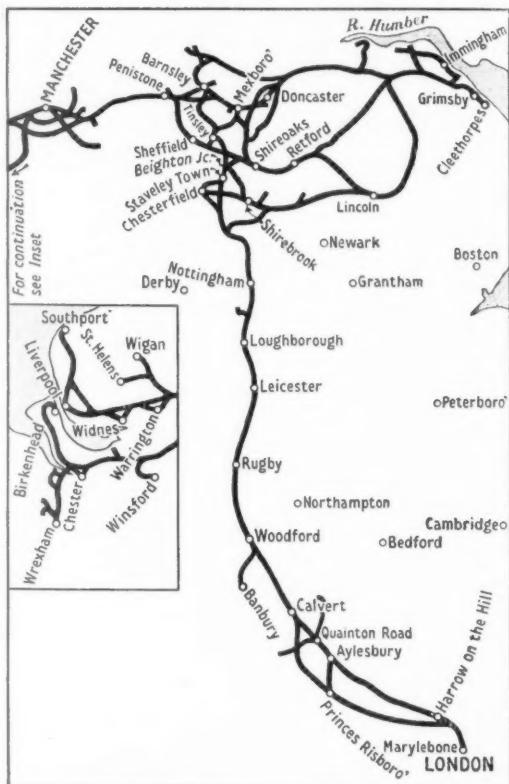
In this album there is the inspiration for many railway books of later years, together with a blend of information and advertisement that points towards the art of the public relations officer of today. A eulogy of Great Central restaurant cars breaks off to remind the traveller that the rich menus "require to be gently tempered by some seductive aid to assimilation and incentive to digestion." Both qualities may be found in a certain tonic table water, whose maker's advertisement happen to appear on the facing page. Similar artless juxtapositions occur throughout the book, and even the imaginary journey over the main line from Marylebone to Sheffield which leads to the author's climax is interrupted at intervals to inspect the enterprises of business gentlemen along the route. At Leicester, for example, some ecclesiastical architecture is examined, and attention is drawn to the activities in this direction of a local plumber, glazier, and painter, whose handiwork on behalf of the laity could be admired at many stations on the line. The same hand shaped "the sanitary arrangements of the Great Tower" at Wembley Park, which stopped short at its first storey, 155 ft. above the ground, after this contractor had attached his appliances.

In the final pages of the book the author enjoys release from the necessity of bowing and smiling at his advertisers—which, it must be admitted, he has accomplished with much freshness and dexterity—and brings us home in imagination on the footplate. Apologising for a deficiency of technical knowledge, he is clearly aware of possible railway enthusiasts among his readers, and it may be recalled here that the existence of this class of person had been revealed to the public by the appearance of our associated publication—*The Railway Magazine*—nearly two years before Marylebone was opened. In fact, the author uses the word "railwayac" to describe those who are "learned in the lore of bogies and buffers, cylinders and cranks, fireboxes and footplates," and may have borrowed the term as a novelty from the pages of *The Railway Magazine*.

Carried away by the excitement of his footplate experience, the author indulges towards the end in some hardly compli-

mentary references to the Metropolitan Railway, whose tracks the Great Central shared from Quainton Road to Harrow. Although the pace has now slackened, he feels that he is covering the ground at even greater speed, for he knows the country and has been that way before "in trains that were—well, not Great Central expresses." Thundering majestically through "puny Harrow Station," they overhaul a Metropolitan up slow, which at first is concluded to be "stationary upon a siding." Closer inspection shows, however, that "the poor little tank engine is bursting its very cylinders, as it seems, in a mad endeavour to escape its giant pursuer." A series of tunnels precludes further observations of this kind, and a few minutes later the author is admiring the confidence with which the driver pilots his train through the labyrinth of tracks leading to the four platforms of Marylebone Station.

Present-day travellers to Marylebone are familiar with the glimpse of the Regent's Canal after emerging from the tunnels. Some of them may recognise "the mammoth crane—massive, monstrous, which has a lifting capacity of 25 tons"; and the "splendid covered wharf" which stirred the enthusiasm of a writer in a somewhat later Great Central publication. Little in the scene today, however, suggests the activity he depicts, with "huge lighters, moored to the wall of the wharf,



Great Central Railway system

ready to glide off, once their capacious holds have received the necessary load, threading their way through London's maze until they reach the Limehouse basin, and so drop down into the broad Thames, to be carried by the tide up or down, as the case may be, to the wharves or to the docks where lie the steamers that await them." In this majestic sentence the Port of London is brought to the doorstep of Marylebone, and the murky waters of the Regent's Canal seem to share in the title of "New and Direct Route" which the Great Central Railway printed on its timetables of March 15, 1899.

Marylebone in its first years was a kind of railway Berlin, isolated from the rest of the G.C. system and accessible only over the metals of a somewhat capricious ally. Time has done little to simplify the situation, even if old acerbities have died and the Chairman of the London Transport Executive

no longer proceeds in his night attire to the point south of Aylesbury Station, where his dominion begins, to direct that Eastern Region trains be refused admission, as the Metropolitan Chairman was alleged at an early Great Central meeting to have done at Quainton Road. The future appears more complicated still, with prophecies of Marylebone being handed over to the Western Region, the rest of the G.C. main line to the London Midland, and the metals of London Transport linking the two as far as the Aylesbury route is concerned. Such a solution shows, at least, how far the science of planning has been elaborated since 1899.

* * * * *

Victorian Railways

THE report of the Victorian Railways Commissioners for the year ended June 30, 1948, opens with a reference to the gravity of the coal shortage towards the end of the period, resulting in a wholesale reduction of passenger train services. Fortunately, the conversion of 81 locomotives for oil burning enabled many trains to be continued, and suburban electric services were little affected. Compared with the last pre-war year, 1938-39, traffic carried in 1947-48 was 52 per cent. greater in terms of goods and livestock ton-mileage, 70 per cent. greater in country passenger journeys, and 26 per cent. greater in suburban passenger journeys. The principal results appear below:—

	1946-47	1947-48
Average miles	4,748	4,725
Train-miles...	15,539,188	16,819,339
Net earnings per train-mile	10.21d.	1s. 3.64d.
Passenger journeys	170,164,983	182,209,652
Goods and livestock, tons	7,406,123	8,439,760
Operating ratio, per cent.	95.13	93.28
	<hr/>	<hr/>
Passenger, parcels, etc., revenue	6,358,675	7,124,590
Goods and livestock revenue	6,108,673	7,991,815
Total earnings	13,576,884	16,321,544
Working expenses	12,915,783	15,224,993
Net earnings	661,101	1,096,551

The year's operations resulted in a deficit of £1,074,366, or £407,802 less than that of the previous year. Working expenses were greater by £2,327,387, mainly by reason of wage increases. The additional costs were more than offset by the revenue increase of £2,758,210, for the greater part of which the increase in freight rates and fares from October 1, the increase in suburban passenger traffic, bountiful harvest, and the higher level of exports, were responsible. The substantial increases in business were handled with 1.7 per cent. less main mileage than that run in the previous year, demonstrating more efficient operation.

Orders have been placed for steam and diesel-electric locomotives and for diesel railcars. Limited progress was made with planned constructional work, such as the widening between Jolimont Junction and Cremorne Bridge and between Alphington and Heidelberg. Preparations for the substantial works in Gippsland to cater for developments in brown coal and briquette production are proceeding. It was expected that during the ensuing twelve months the two sets of firing equipment, ordered from Germany, for testing the possibilities of using pulverised brown coal for locomotives, would be delivered.

Standardisation in Excelsis

(From a Correspondent)

FTER the first world war many debates in influential circles turned on the advantages of standardising almost everything connected with railways. One of the wisest of the old school of general managers, after listening to great argument about it, wrote in 1921 that, as a principle, standardisation did not attract him. The word, instead of portraying the radiant hues of a new and better world, suggested to him dullness and monotony. He put his trust in the golden mean, believing that standardisation is a thing of which we can have too much or too little according to circumstances.

On the whole the amalgamated companies seem to have held much the same opinion. Between the wars, they pursued a judicious middle course, reducing many things to common patterns without making a fetish of uniformity. They learned that sometimes the cost of standardisation was prohibitive. They also found that on occasion it paid to leave responsible officers

to choose the working methods which happened to suit them; the results were what mattered, not the way of securing them.

During the first critical years of its existence, would the Railway Executive not have been wise to pursue a similar policy of moderation? On January 1, 1948, it took over the fundamental task of renovating railway equipment and fixed properties. Until arrears of maintenance are overtaken, how can our people enjoy the facilities which they are entitled to expect after 3½ years of peace? Without improved services of every type, British Railways stand a poor chance of increasing their traffic receipts and may lose much of the goodwill which the public used to accord them. The statement published on February 18 shows that the receipts from the working of British Railways declined by 4.4 per cent. in the first four weeks of this year, though that was a period of full employment. With passenger receipts down 13.8 per cent. and merchandise receipts down 5.4 per cent., the great activity of the iron and steel trades alone saved the railways from a disastrous slump.

The January results cannot have taken the Railway Executive by surprise, because it had ample warning last year that its most valuable traffics were declining persistently. Yet apparently it spent a disproportionate share of time and energy on plans for standardising working arrangements, departmental organisations, rolling stock, and permanent way. Could these projects not have been considered less precipitately with advantage all round? Most of them, especially the more ambitious ones, are long-term schemes and will not yield any immediate cash return. On the contrary, the planning stage must have cost a good deal of money, as well as diverting staff from productive work, and more expense will be incurred in giving effect to proposals such as those for standardising rolling stock, outlined in *The Railway Gazette* of January 7. New designs cannot be introduced into the railway workshops on a large scale without running up a large bill of costs straightaway.

In existing circumstances, would the Railway Executive not have been well advised to carry forward quietly the work of evolving common standards for rolling stock which the old companies were doing? Is the Railway Executive not in danger of forgetting that it is in charge of a commercial undertaking? How else can one account for the lighthearted decision to scrap the standard track developed by engineers who gave our railways the best permanent way in the world! And this at a time when British Railways have been complaining that their supplies of steel were restricted and have arrears of renewal of track amounting to over 2,500 miles! Heavier rails are not required in this country as they are in America with its colossal trains moving at double the average speed attained by our railways. What is wanted here is the restoration of the old standard of permanent way maintenance.

Little is being done to reduce the "backlog." The 1949 programme involves laying new rails over 1,484 miles, 1 mile less than the old companies relaid in 1938. It is lamentable to read in the Ministry of Transport's report on the New Southgate accident last July that there are general limits of speed on the part of the East Coast route over which twelve years ago high-speed trains covered the 120 miles from Kings Cross to Newark in 100 minutes.

The matter of immediate consequence is to free our main lines as quickly as possible from all speed restrictions, which are due to inadequate maintenance. If that were done by the end of this year, we might hope for satisfactory timetables in 1950. The public wants better and cheaper services forthwith. People are not attracted by the distant prospect of travelling in standard coaches—painted in standard colours—hauled by standard locomotives—also in standard livery—over standard flat-bottom rails. The ordinary person who uses railway trains is a realist and does not trouble his head about posterity. With the change of one word, a couplet to be found in all books of quotations expresses his attitude:—

"Your chilly plans I can forgive,
This warm kind world is all I know."

BRITISH RAILWAYS FIBREGLASS ORDERS.—British Railways have placed an order with Fibreglass Limited, St. Helens, Lancs., for Fibreglass rigid sections to be used for seven water-softening plants in the Eastern Region, for 60 sets of Fibreglass railway mattresses for Eastleigh, and two sets of Fibreglass mattresses (a further order) for Cowlairs, Glasgow.

March 4, 1949

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Repair of German Coaches in Belgium

Société Anglo-Franco-Belge
des Ateliers de la Croyère, Seneffe et Godarville,
La Croyère, Belgium. February 19

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—We have read a paragraph on page 95 of your issue of January 28 concerning the repair of German coaches in Belgian factories. It is completely wrong to say that the contract has been cancelled because Belgian prices were too high, after 200 coaches have been repaired.

Actually, there are more than 600 damaged coaches to be repaired in Belgium, and this contract is being executed according to a schedule which provides for its completion on May 15, 1949.

Will you be kind enough to have this published to correct a mistake which is prejudicial to Belgian railway rolling stock manufacturers, of which we are one of the most important?

Yours faithfully,

CHEF DE SERVICE COMMERCIAL
LE DIRECTEUR GENERAL

Preservation of a Veteran Tramcar

245, Cricklewood Broadway,
London, N.W.2. February 9

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—Your readers may be interested to learn the sequel to the story of the museum tramcar which appeared in *The Railway Gazette* for January 28. The tram in question is one of the open-top "knifeboard" cars of the Southampton Corporation, with back-to-back longitudinal seats on the open deck, and is one of the last surviving four-wheel open-top trams in Britain.

This car, at present in Leeds, is in perfect mechanical condition and excellently finished, and will be moved shortly to a more permanent home at Blackpool. Our museum committee considered that an example of this almost-extinct type of tramcar should be retained, and to date over £60 has been contributed towards its purchase and preservation. The cost of transporting such an unusual load is, however, considerable, and we should welcome also the support of any of your own readers who may be interested.

We should explain, perhaps, that the *raison d'être* of our Society is the advocacy of modern tramways, the preservation of historic rolling-stock being an independent venture on the part of some of our more historically-minded members. As a Society, we exist to press for the retention, extension, and modernisation of tramways, whether by reserved track, street track, or subway, which we consider can alone provide efficient, economical, safe, speedy, and reliable transport in areas not served by "heavy" underground or surface electric railways.

Yours faithfully,

J. W. FOWLER,
Chairman of Council,
Light Railway Transport League

Professional & Technical Staff

Derby. February 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—In your leading article of February 18 on Railway Administration it states:—"Sir Eustace Missenden recently stressed the need for general incentive to attract the best men to British Railways." It is difficult to associate this expression of opinion with actual fact when it is recalled that under the P. & T. award the R.C.A. proposal that members of the P. & T. staff who were members of, or qualified for election to, one of the major Institutions (Civil, Mechanical, Electrical) should receive an addition of £20 per annum to the scale salary. This was not adopted, so presumably it was rejected by the railway representatives.

A short-sighted decision and a lost opportunity if ever there was one, surely. One wonders if the negotiators appreciate the amount of study required to obtain the endorsements to H.N.C. or B.Sc. degree. Have they heard that it is the hope of reward that sweetens labour, or that the integrity of the employer is one of the most valuable invisible assets? Without doubt a man who has gained the endorsements is a more useful employee, but he has no further reward than his less industrious and unqualified colleague within the same grade, so long as he remains in the railway service.

May I refer also to the letter from "R.C.A. Member" in the same issue? It does not appear to be generally known that the 7s. 6d. a week was not granted to the P. & T. staff, and I have noted in the press, even in *The Railway Gazette*,

reference to £19 10s. granted to all salaried grades. It was understood to be a cost-of-living increase, and costs have increased equally to all, so why is a small section excluded? Can an authoritative answer be given to this question?

I can visualise more discontent arising from this 7s. 6d. award if the 12s. 6d. now being claimed is granted. A pound to a penny the administration would rule that the P. & T., not being in receipt of the 7s. 6d. award, would not be eligible for the 12s. 6d., or what sum may be awarded.

Yours faithfully,
D. H. KEENE

Level Crossing Protection

76, Horsell Moor,
Woking, Surrey. February 8

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—Mr. Booth's letter published in your February 4 issue outlines a method of level crossing protection which is widely used in Switzerland. Indeed, I obtained the impression that this method was adopted at nearly all level crossings with the exception of those located in towns or on busy highways. Some of these crossings are situated in very remote places, and the warning bells and lights no doubt operate automatically. I do not know whether any penalties are imposed for non-observance of the "train approaching" indications, but Swiss drivers, at least, never fail to stop at the first sound of the bell.

Whether the average British driver, in his native land, would submit to such self-discipline is, I think, rather doubtful. There would probably be a tendency for drivers to "rush" the crossing, particularly if no train was actually in view when the railway was reached.

Yours faithfully,
GEORGE W. WOOD

Longmoor Garrison Church

Transportation Centre, Royal Engineers,
Longmoor Camp, Liss, Hants. February 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—You were good enough to publish a letter of mine in your issue of December 19, 1947, on the subject of a Memorial Window in the Garrison Church of St. Martin's at Longmoor, the home of the Transportation Centre, R.E.

The response to my appeal for funds from those who have served, or are still serving, in the Transportation Service or in Movements was immediate, and, in the hope that you will again allow me space, I write to say that the window will be unveiled and dedicated on Sunday, September 4, 1949, the day following "Public Day" at the Transportation Centre, R.E. The Chaplain-General to the Forces has very kindly agreed to dedicate this window, which is the work of the late Mr. Martin Travers, A.R.C.A. (London).

The detailed arrangements will be announced nearer the date, but the Dedication Service is likely to be at 11.30 a.m. All those who subscribed or who know Longmoor are cordially invited to this service.

Yours faithfully,
R. GARDINER,
Brigadier
Chairman, Longmoor Garrison
Church Committee

Railway Police

Oudh Tirhoot Railway,
Office of General Manager,
Gorakhpur, U.P.,
India. February 10

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—With reference to your editorial note on "Training British Railway Police," published on page 738 of your December 31, 1948, issue, I shall be glad to know whether the cost of railway police employed on British Railways is borne by the Government or is charged to railway revenues. The general practice on Indian Railways, which are a central Government concern, is that the police allocated to them for law and order duties within railway premises are invariably provided by the provincial Governments concerned for the portion of railway falling within their respective jurisdictional boundaries. The only exception is a few companies which, though raised temporarily by the provincial Governments as usual, have been charged to railway revenues as a special case in the recent past when the disturbed conditions in the country required provision of additional emergency police.

I shall be glad to know the procedure of recruitment, train-

ing, and maintenance of railway police that has been followed on British railway systems, together with the changes, if any, that have taken place as a result of the recent nationalisation.

Also, may it please be stated whether the railway police are under the administrative and executive control of railway officers or Government; if the former, the extent to which magisterial and other powers necessary for taking cognizance of offences and maintenance of law and order are vested in the railway officers.

Yours faithfully,

G. K. AMBADY,
for General Manager

(1) The costs of railway police employed on British Railways are charged to railway expenditure.

(2) Recruits between the ages of about 20 and 30 are obtained from Labour Exchanges, and a few recruits are also taken straight from school. Training takes place in the police offices and in the special schools which have been established for railway police; this practice has not changed since nationalisation.

(3) The railway police are under the administrative and executive control of the Railway Executive.

(4) No magisterial powers are held by railway police, but they have, of course, the normal police powers.—ED., R.G.]

Lamington, and Similar Accidents

3, Berridale Avenue,
Glasgow, S.4. January 23

TO THE EDITOR OF THE RAILWAY GAZETTE
SIR.—The correspondence and reports on firebox failures have been of great interest to me as a marine engineer. At sea, water-level readings are extremely important, even with the Scotch type of smoke-tube boiler, and it is essential that gauges record correctly and with minimum chances of misplaced installation.

Not having any practical locomotive experience I have

method described above has been imprinted on my mind by an occasion on the Western Ocean after a convoy incident, when lives were saved through an engineer, in darkness, being able to feel the sawcut slot with his finger and replace the handle which had been removed by explosion from a vital change-over cock.

In closing, I wish to record appreciation for your publication of very comprehensive accident reports which, although they apply to railway matters, provide food for thought concerning general operating technique and overall engineering practice.

Yours faithfully,
J. D. GILLIES

An Old Locomotive Photograph

British Railways, London Midland Region,
Advertising & Publicity Department.

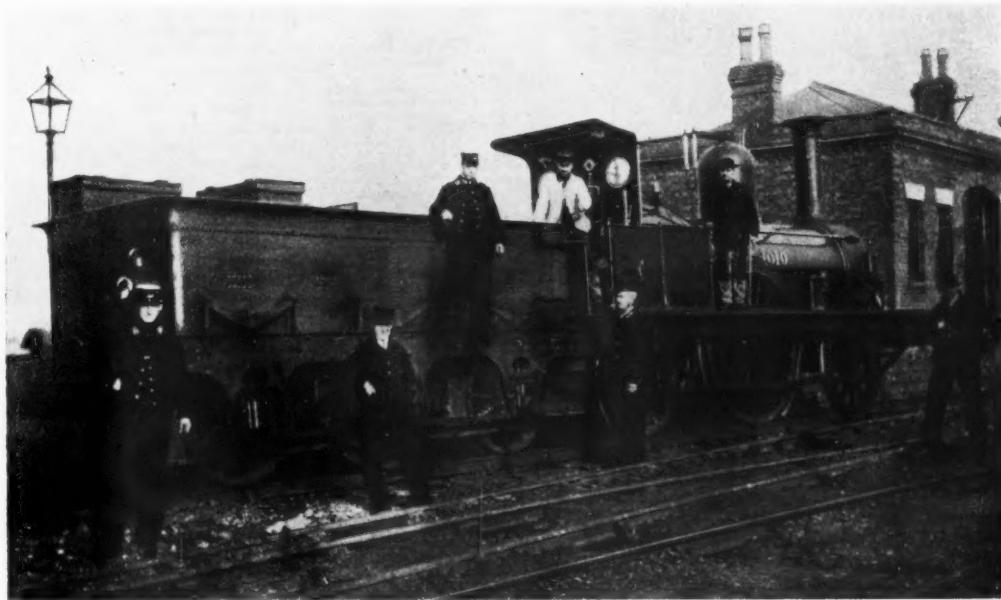
Euston House, London, N.W.1. January 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—Referring to my letter of July 9, 1948, which appeared in your August 6, 1948, issue, as a result of the publication of the old photograph of a Midland Railway "Jenny Lind" class engine taken in Chesterfield Station during the period 1867/1868, another old photograph of the same class of engine has been received by our Chief Mechanical Engineer, Mr. H. G. Ivatt. It was discovered some years ago by Mr. E. H. C. Shorto, Assistant to our Divisional Motive Power Superintendent, Derby, among some old documents at Saltley Motive Power Depot.

This new photograph (a copy print of which is enclosed) shows the opposite side of the engine to that shown in the "Chesterfield" photograph, and as it is a perspective view taken from a closer range, it contains more detail of the Derby-built "Jenny Lind" engines than does the earlier photograph.

Through the kindness of Mr. P. C. Dewhurst, M.I.C.E., it is possible to give the history of the engine shown in the



Midland Railway "Jenny Lind" class locomotive, No. 1010, photographed between 1868 and 1873

refrained from writing previously on this matter until it has become evident from illustrations, remarks, etc., that a certain marine practice is not generally followed by railway workshops.

I refer to the method used to determine the correct position of the "through-passage" when assembling the stop-cock. The erecting fitter normally sawcuts a slot on one end of the rotatable plug (either handle or nut-fixing end is used according to the construction of the stop-cock). This slot runs parallel with the through passage and gives positive visual indication. On joining a new ship it is easy for an engineer to be misled by a twisted plug handle, and it is always necessary to check the sawcuts prior to gauge-glass blowing for the first time.

Perhaps I have laboured a somewhat minor point, but the

photograph. It was built at Derby in May, 1856, as M.R. No. 112, in replacement of an old Nasmyth engine from the Bristol & Birmingham Railway. The cylinders were 15 in. by 20 in., and driving wheels 6 ft. in diameter. In September, 1867, it became No. 732, and in September, 1868, No. 1010. The engine was scrapped as No. 1010 in September, 1873. Thus, the photograph can be dated as having been taken between 1868 and 1873, but the location has not been identified.

It is interesting to note that the original picture in this case was a daguerreotype made direct on to glass. The reproduction processes were carried out by our Chief Mechanical Engineer's technical staff at Derby.

Yours faithfully,

JOS. O'NEILL,
Advertising & Publicity Officer

March 4, 1949

The Scrap Heap

SAVE THE COAL

As part of the campaign to economise in coal consumption, a small pictorial poster is being issued to British Railways motive power depots. The poster, which bears the slogan: "To save the £s save the lbs," points out that emitting black smoke and blowing-off steam, waste coal, and asks enginemen to save energy and coal by controlled firing.

MORE TRANSLATORS' PITFALLS

The reference to "Translators' Pitfalls" in *The Railway Gazette* of February 18 calls to mind other instances. Before the war, notices in English in some Italian trains warned those who damaged seats or fittings that they would be called on to make an oblation (if caught), while a restaurant near the Gare du Nord in Brussels invited the "Gentlemen Travellers" to partake of the "Day's Mess" (Plat du Jour).

The number of French travel agencies which translate "Renseignements" as "Informations" is remarkable, while "Pullmann" is another offence. A case is known of a French booking clerk referring to two Pullman reservations as "Deux Pullmen."

An English language guide once appeared in Paris with "Britannia" on the cover, and "Golfe de Morbihan" translated as "Morbihan Golf Links." It is feared that the offender was an Anglo-Saxon in this case.

The "best ever" would seem to be the case of a bi-lingual guide published between the wars by a French bus company. Among the regulations for boarding buses was one laying down special consideration for expectant mothers. "Femmes enceintes" was actually translated as "Ladies in the family way."

H.A.V.

UNITED STATES RAILWAYS "MAP"

The accompanying illustration is taken from an advertisement by the Portland Cement Association, Chicago, in our American contemporary, the *Railway Age*. It shows not only the totems generally adopted by many of the principal Ameri-

can railways, but also, in a very broad way, the territories served by each of the lines, and helps to locate the position of the major railway systems in North America.

BEHIND THE L.M.R. SCENES

The London Midland Region states that more than 43,000 enthusiasts visited the 125 engine sheds on the Region last year. Among them were engineering students, schoolboys, grandfathers, and railway fans of all ages, and Londoners topped the poll. More than 16,500 enthusiasts from London went to Willesden, Cricklewood, Camden, and other engine depots. This total is a record and shows that the locomotive maintains its hold on the public imagination.

A. E. W. Mason, the novelist, who died last November, left £70,646. In his will he wrote: "I do not wish to recommend that sums of money from which life interests are drawn should be invested either in Government stock or in gilt-edged securities. As protection they are both very frail. Local loans, for instance, a Government stock, was suddenly knocked down from 3 per cent. to 2½ per cent., for no reason except that the Chancellor of the Exchequer so decided, and as for gilt-edged securities, the miserable plight of railway investments is a sufficient warning."

100 YEARS AGO

From THE RAILWAY TIMES, March 3, 1849

NORFOLK RAILWAY.—The Directors have heard with regret of the resolution passed at the General Meeting of the Eastern Counties Company, in reference to the amalgamation with this Company. As the whole proceeding has evidently taken place under great excitement, the Directors of the Norfolk Company cannot but hope that the subject will receive more mature consideration before any attempt is made on the part of the Eastern Counties Company to repudiate an agreement entered into with the sanction of Special Meetings of the Proprietors of both Companies, upon the faith of which, the line and works of the Norfolk have for the last ten months been placed in the unoccupied possession of the Eastern Counties Company, and treated by them in every respect as their own property. In the meantime the Shareholders of the Norfolk Company may be assured, that any such attempt, if made, will be most strenuously resisted by their Directors, who rely with the most perfect confidence upon the justness of Parliament, for the protection of this Company's rights, after an impartial inquiry shall have been made into all the circumstances of the case.

(Signed) ADAM DUFF, Chairman.
Guildhall-buildings, London, 2nd March, 1849.

United States Railway Systems



A reproduction of an advertisement by the Portland Cement Association, Chicago, showing roughly the positions of the major railway systems in the U.S.A. (see paragraph above)

BIGGER POST OFFICE SURPLUS

One of the facts disclosed in the first commercial accounts published by the Post Office since the war started is that because of the substantial growth in postings by Government Departments the number of inland letters is now 10 per cent. higher than before the war. Volume of work performed at post office counters has increased by about 60 per cent. mainly through additional services carried out on behalf of other Government Departments by the Post Office. Total business in the year 1947-1948 resulted in a surplus, after charging interest on capital, amounting to £19½ million, which compares with £10½ million for the previous twelve months. Income from all sources exceeded £182 million.

KEEP OFF THE CEILING

A carriage cleaner went into a hand-some new railway coach at Acton, W., and began to clean. He brushed the smart upholstery, flipped a cobweb high up the wall, gave the ceiling a glance, and exclaimed "Hey!"

On the beautiful shiny surface were footprints of large size.

The stationmaster, the ticket collector, and the porter went and had a look—stared at one another with a wild surmise. Footprints, indubitably. But whose? And how?

Rush-hour Londoners battling to and from work can stand, hang, clutch, lean, crouch, and generally fool about with physical laws, but so far nobody has reported passengers on ceilings.

The theory prevailing at Acton was that maybe some straphanging hooligan had turned a somersault in mid-coach and registered his great footmarks on the roof.

I asked if that could be done in a crowded carriage. And wouldn't somebody have reported a black eye?

"Well," said a London Transport Executive official, slightly testy after much thought, "I suppose it was an empty carriage and he did it as a silly joke or something."

"But could he balance himself in that position in a moving train?" I said.

"And he wouldn't risk doing it in a station, would he?"

"And he must have been very tall, mustn't he?"

The L.T.E. grew redder. "Now don't you start theorising," it said.—*From the Daily Mail.*

Tailpiece NIGHT BOAT

At night time, when the flying furies ride
Upon the wave-tops, and their gnashing teeth

Snap angrily and greedily beneath,
The mighty liner, in contemptuous pride,
Passes serenely on her trackless way.

"Oh, let her go," they cry. "A sure prey
Lies nearer to our grasp," and out there creeps

The little packet boat, whilst England sleeps
And landsmen thank their lucky stars
They were not born Jack Tars.
Swift and secure she slips the Garden Isle
And pokes her nose out in the Channel wrack;

Swiftly and suddenly the furious pack
Falls on her fore and aft, yet, with a style
So like a pure-bred hound, she keeps her head

Set fair for France and will not be denied,
Till, in the dawn, at France's waterside,
She snugs demurely down and goes to bed.

"It's just my job to cheat the sea"
She murmurs drowsily.

A. B.

M

A
Joh
The
load
Up
exp
amo
and
eight
to
amo
121,
ing
The
from
to
last
the
ton
D
ber
from
tons
on t
viou
tons
incre
vaal
seas
men
in N
from
viou
404,
more
veye
Ra
Dec
high
yield
tive
reach
class
ende
£1.47
high
Re
syste
line
ber
pens
net
incre
ing
for g
amou

In
tin f
end e
be a
1946
nation
every
incre
specia
vans.

Sh
lesse
nati
porte
repre
plan
way
still

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

Traffic Features and Earnings

A special gold train was run from Johannesburg to Cape Town in November. The gold moved weighed 60 tons and was loaded in four trucks and a special van. Up to and including November 21, maize exports totalled 2,327,440 bags. Of this amount Durban handled 1,600,825 bags and Cape Town 719,190 bags. In the first eight months of the financial year, April to November, 1948, truck loadings amounted to 3,163,381, an increase of 121,583 as compared with the corresponding period of the previous financial year. The highest tonnage of goods ever cleared from the ports in one week, amounting to 107,900 tons, was moved during the last week in November. Clearances from the ports for that month totalled 402,700 tons.

During the four weeks ended November 27, 1948, the tonnage of coal hauled from the collieries amounted to 1,544,990 tons, a decrease of a little over 10,000 tons on the corresponding period of the previous year. In the same period 161,383 tons of coal were shipped. The greatly increased demand for petrol in the Transvaal, with the approach of the holiday season, made necessary special arrangements for its transport. In the last week in November, 6,203,000 gal. were moved from the ports. This exceeded the previous record for a week's shipment by 404,000 gal., and was the first time that more than 6,000,000 gal. had been conveyed in one week.

Railway earnings for the week ended December 11, 1948, were maintained at a high level. Passenger and goods traffic yielded £309,270 and £925,465 respectively. Earnings from parcels traffic reached £50,374, a new record for this class of traffic. Earnings for the week ended December 4 reached a total of £1,477,189. This was more than £50,000 higher than the previous record.

RHODESIA

Results

Receipts of the Rhodesia Railways system (including the Beira and Shabani lines) for the eight months ended November 30, 1948, totalled £6,763,454. Expenses amounted to £4,998,656, leaving a net operating revenue of £1,764,798; an increase of £497,998 over the corresponding period of the previous year. Receipts for general goods during November, 1948, amounted to the record figure of £408,586.

Effect of Increasing Capacity

In the General Manager's Official Bulletin for February it is stated that by the end of the current year train-mileage may be as much as 38 per cent. above the 1946 level, and that the impact of additional equipment will be felt throughout every grade in the service. A substantial increase in personnel will be needed especially to man locomotives, guards vans, and new stations.

Beira Congestion Lessened

Shipping congestion at Beira has lessened as a result of voluntary co-ordination achieved between Rhodesian importers and railway, port, and shipping representatives. The import flow has been planned to correspond with port and railway capacity, though this will be subject still to upsets caused by irregular flow of

shipping from congested ports elsewhere in Africa. It is expected that the backlog of shipping will have been cleared by the end of March.

Rolling Stock Shipments

The largest single shipment of railway rolling stock ever to be brought to Beira has arrived there for the Rhodesia Railways. The consignment comprises four 15th class Beyer-Garratts, 60 wagons of various types, and 3,500 tons of track material.

NEW SOUTH WALES

Motive Power Changes and Additions

Because of the shortage of heavy rails for replacement the largest passenger locomotives, 4-6-0s of Classes "C35," "C36," and the "C38" 4-6-2s, have been prohibited from running beyond West Maitland on the Northern line. The Brisbane express and the mail trains are being worked by the older and smaller "C32" class engines, double-heading where necessary. The "C32" class was introduced as long ago as 1891, but subsequent rebuilding and superheating has made them 17 per cent. more powerful than when built.

The first of the 20 new two-car railcars was tested on December 22. The cars, which are similar in appearance to the "400" type units, have two 165-h.p. engines driving each bogie.

VICTORIA

Pulverised Coal Equipment

Pulverised brown coal equipment from Germany has arrived and will be fitted for trial on an "X" class 2-8-2 and an "N" class 2-8-0.

New Works

Parliament has authorised construction of the projected new electric line, 4½ miles long, from Alphington to East Preston in the Melbourne suburban area. There will be six stations. It is expected that basic shuttle service will be provided by A.B.M. type double-ended motor coaches.

Contracts have been let for the earthworks for the duplication of the Gippsland main line between Drouin and Nilma, and Nilma and Yarragon. To provide staff exchange at speed in this line large electric staffs are being replaced by miniature staffs.

INDIA

Bombay Hit by Hurricane

On November 21, 1948, heavy winds began to blow across the island of Bombay, intensifying into a gale during the night. By the next morning a hurricane of over 90 m.p.h. was raging. The city was completely paralysed with no electric lights, trams, buses, or electric trains as the five hydro-electric power supply lines from the Tata electric supply were damaged.

Thousands of trees were uprooted, blocking roads and damaging buildings. Hoardings were blown down and roofs ripped off. At the Gateway of India the heavy stone parapet along the sea wall was carried away by the force of the sea, strewing stone blocks across the road. One of several vessels carried away collided with an electric transmission pylon in Thana Creek, causing further dislocation in power supply.

Power was restored by the evening of November 23, but was strictly rationed, and the electric train services on the B.B.C.I. and the G.I.P.R. railways began a skeleton service.

The B.B.C.I.R. suffered more damage to communications than the G.I.P.R. Almost every pole carrying telecommunication circuits north of Bandra was uprooted and this continued as far north as Palghar, approximately 47 miles. The first trains re-entered Bombay Central without signals (which are colour-light on the suburban section) and without the regular block or track-circuit working. The electro-pneumatic points at Bombay Central and the all-electric points at other places had to be hand worked.

The Post & Telegraph Department carried out restoration of communications efficiently and normal working was restored about one week later.

ITALY

Reconstruction on Venice—Bologna Line

The replacement of the temporary structure carrying the Venice-Bologna main line across the Po to the north of Pontelagoscuro, 2½ miles north of Ferrara, by a permanent double-track bridge is reported to be making good progress. It is believed that the new bridge, the most important on this important main line, will be opened to traffic early this Spring. The bridge will consist of six spans resting on five pillars. Each of the four main spans will be 247 ft. 11½ in. long.

GERMANY

Reichsbahn Wagon Orders

Wagon orders placed by the Reichsbahn with the bizonal wagon-building industry cover 12,600 open wagons (O-class) of the so-called Duisburg type, and 2,400 covered vehicles (G-class) of the Bremen type. Reichsbahn orders placed abroad, in Belgium, Czechoslovakia, Hungary, and Italy, total 18,000 vehicles, including 3,000 open wagons of the Duisburg type. Certain components of the wagons are supplied by the Reichsbahn to the builders.

The renewal and increase of the existing wagon fleet of the Reichsbahn is an urgent problem, as the revival of economic activity in Western Germany already is straining heavily the transport potential of the Reichsbahn.

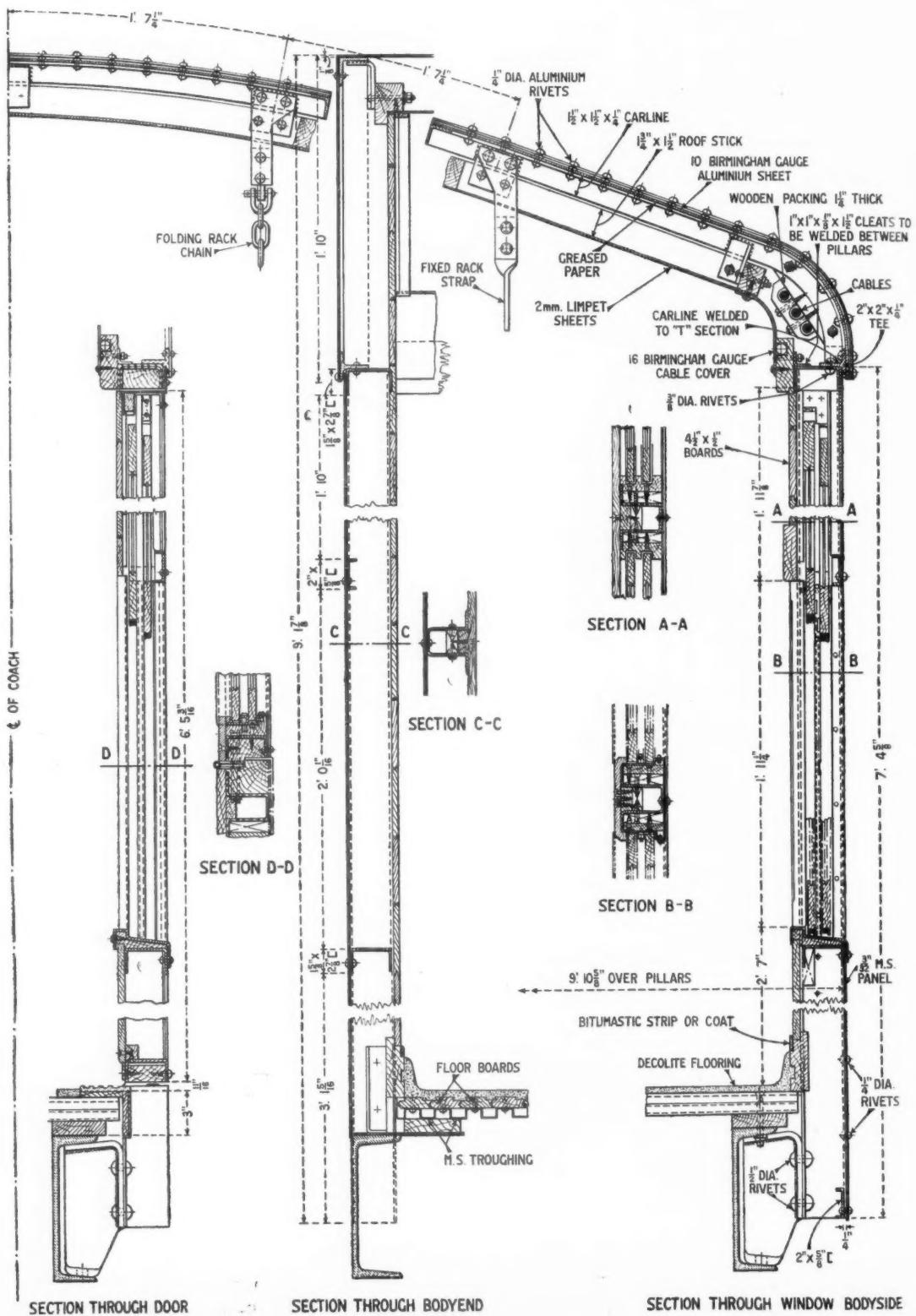
Rail and Road Goods Traffic Co-ordination

Arrangements to avoid ruinous competition between the Reichsbahn goods services and private road haulage services have been concluded. The agreement states that the Reichsbahn claims no prerogative in respect of either its suburban or long-distance goods services which might affect adversely road hauliers, and it has repudiated any idea of developing its road goods services excessively or as a monopoly. Road hauliers agreed with the point of view of the Reichsbahn, that, within the framework of the technical development of the railways generally and the door-to-door feeder and distributive services, it cannot renounce the use of road vehicles.

Inter-Ruhr Fast Services

The special fast services between the main centres of the Ruhr which operated before the war and were partly revived in 1948, will be intensified as a result of the economic advance in the Ruhr since the currency reform last year. They are also to be extended to adjoining areas.

Further G.I.P.R. Coaching Stock with All-Metal Bodies



End and body cross-sections

Further G.I.P.R. Coaching Stock with All-Metal Bodies

Construction of 74 coaches on 68-ft. underframes similar to the earlier 60-ft. type

By C. W. Clarke, M.I.C.E., M.I.Mech.E., M.I.Loco.E.,
Chief Mechanical Engineer, Great Indian Peninsula Railway

THE first ten coaches of an all-metal 60-ft. underframe design were completed by the Matunga workshops of the Great Indian Peninsula Railway and placed in traffic before the end of 1947. These coaches were the subject of an article in *The Railway Gazette* of May 14, 1948, and the G.I.P.R. is now following their construction with 74 similar coaches, though on 68-ft. underframes and embodying a different type of flooring.

In the earlier 60-ft. coaches, prefabricated reinforced Indocrete slabs were used for the flooring, but in the coaches now under construction, a special type of flooring using pressed-steel troughing with

wooden battens riveted to the floor plates and surfaced with Decolite, has been used. Experience of the 60-ft. coaches in service, showed that reinforced Indocrete was not entirely a success in this case, because its ageing qualities were affected by the vibration of the coach and, furthermore, contraction of the Decolite was so severe, that it tended to form corrugations in the surface of the flooring. As a result, the new type of steel trough and wood prefabricated flooring was developed in the G.I.P.R. workshops and details of its construction are shown in the accompanying illustration.

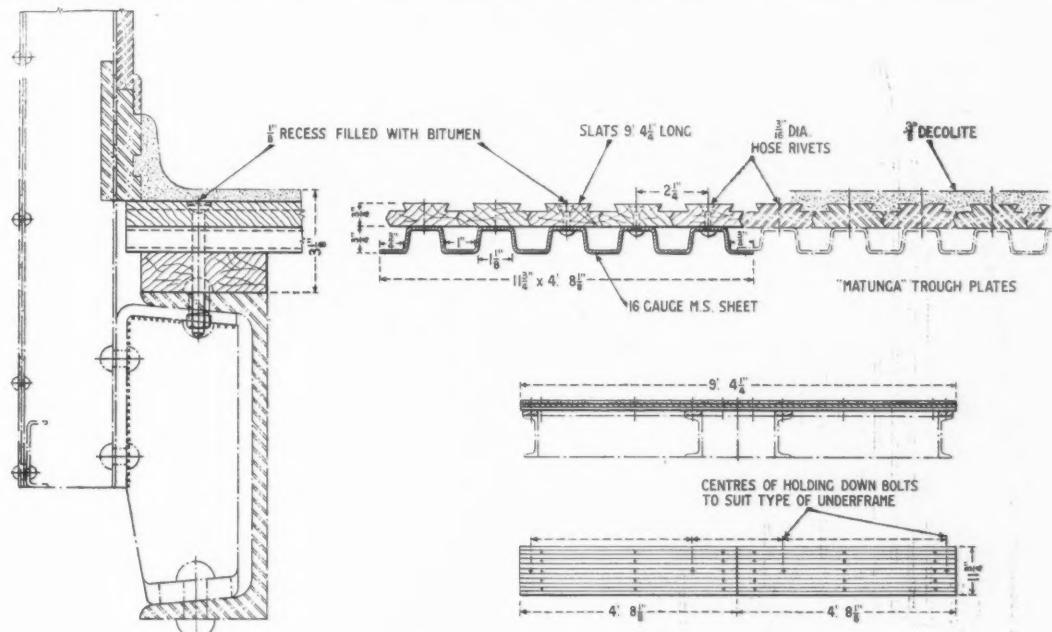
The new flooring is fire-resistant and is prefabricated in unit sections, which

readily can be assembled on the coach underframe, thereby reducing assembly time and cost. The troughing plates are manufactured in a suitable press at Matunga and the loading characteristics of the flooring have proved to be superior to those of reinforced Indocrete, or a wooden floor in which thick wood sections are used.

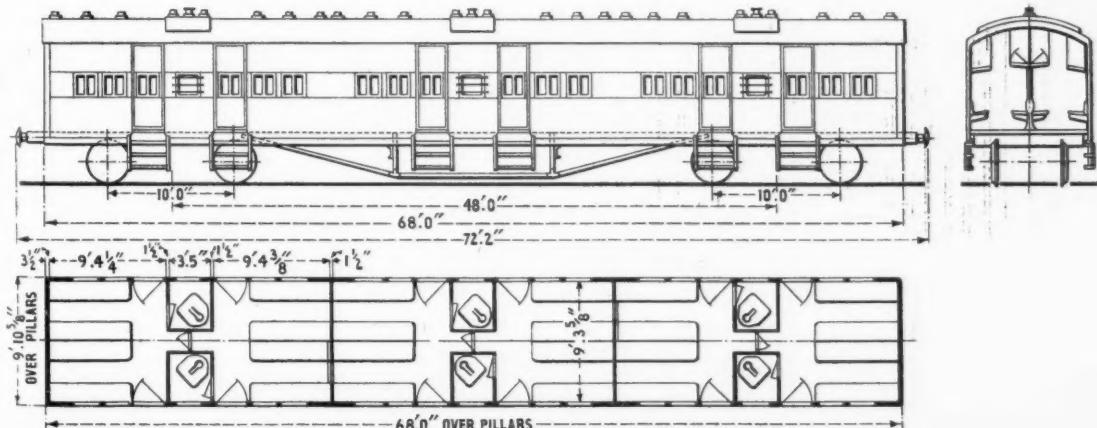
The new prefabricated floor is considerably lighter than the reinforced Indocrete floor and is about 7 per cent. lighter than the wooden floor previously used as standard construction.

WEIGHT OF THIRD CLASS COACH ON 68-FT. UNDERFRAME (Folded-Plate Construction)

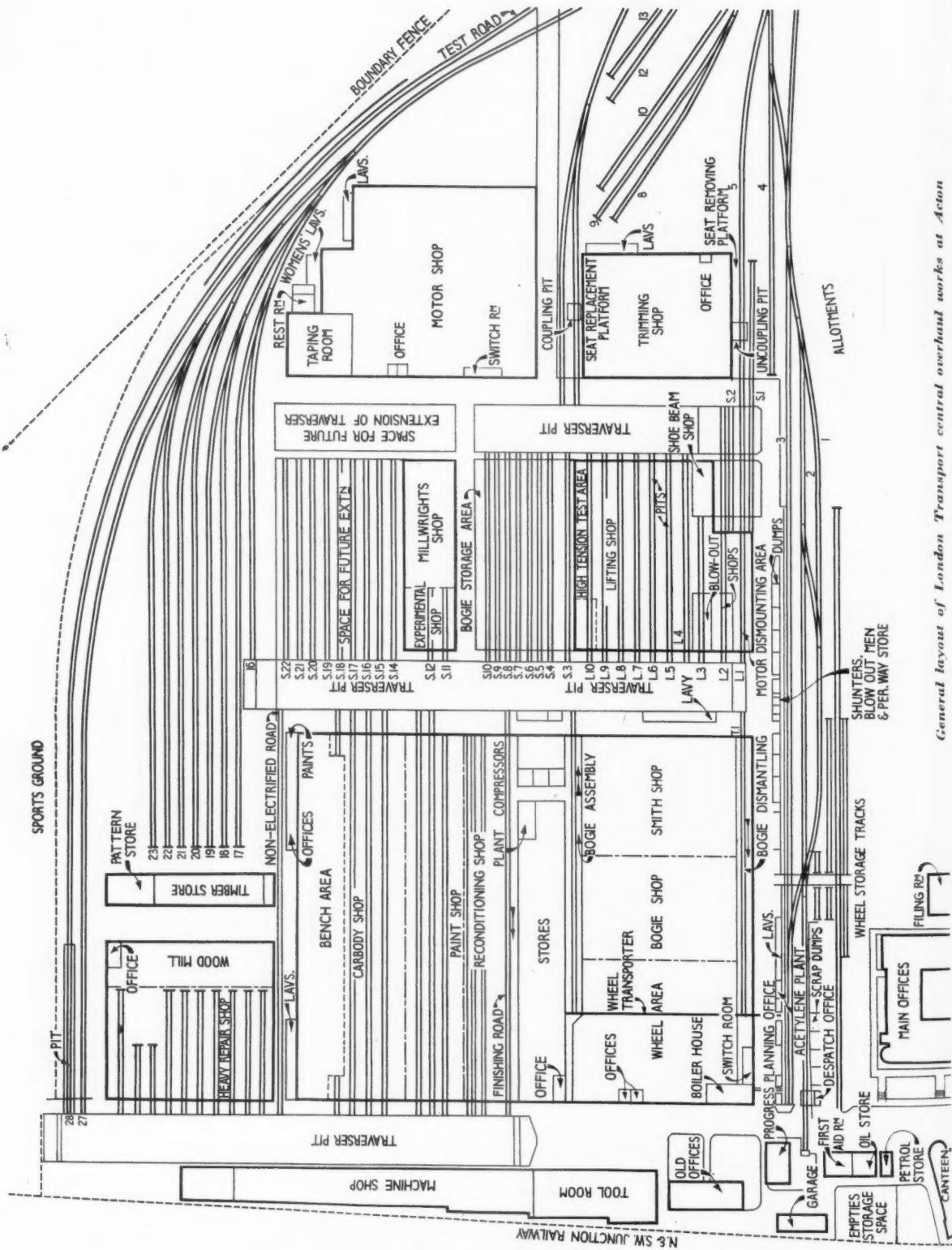
	Tons	Cwt.	Qr.
Underframe with bogies complete	24	18	2
After erecting steel body framework with exterior panels and roof sheets	31	2	2
After fixing the steel trough-and-wood flooring	33	3	0
After fitting interior casing	41	15	0
After laying flooring composition and latrine pans	43	16	0
Complete coach, with seats and bunks (tare)	48	1	0
Similar coach with wood body (tare)	48	11	0



Details of the special flooring used in the new 68-ft. coaches



Layout and principal dimensions of the coach



General layout of London Transport central overhaul works at Acton

March 4, 1949

Reorganisation of Acton Works

Completion of a further stage in London Transport plans for the re-arrangement of the various repair shops at Acton



Acton Works administrative offices

A FURTHER stage in the reorganisation of the London Transport Executive's overhaul works at Acton recently has been reached in the completion of extensive alterations to the car-body shop. After the formation of the London Passenger Transport Board in 1933, Acton works became responsible for the rolling stock of the former Metropolitan Railway, and with the tube extensions further facilities became necessary. As a result, plans for extensions and alterations were approved in 1936, which, it was considered, ultimately would provide for the maintenance of some 5,000 cars. The major changes included new paint, seat trimming, and motor shops. It also was decided to construct a new machine shop and tool room and to alter the layout of most other shops.

Original Scheme Modified

Though the extensions were completed before the war, the rearrangement of the existing shops was only partially completed when such work had to be suspended. On the cessation of hostilities, further consideration was given to the outstanding works, and it was decided to modify the original scheme to some extent, so as to facilitate further planned production methods and the operation of the incentive bonus system. Early in 1948, approval was given to proposals for the rearrangement of the reconstruction and car-body shops, recently completed, and there now remains only the need for a new layout of the wheel area, which, at present, is too congested.

Originally constructed as a new paint shop, the new car-body shop more recently was used for the rehabilitation of cars stored during the war and subsequently required for service on the Central Line. The shop had been used during the war for the overhaul of tanks and armoured vehicles, and when the Central Line rehabilitation work was completed, opportunity was taken to rearrange it as a new car-body overhaul shop. The number of roads available has been reduced from six to three full-length tracks and two bays, and the remainder of the space is occupied by an extensive bench area.

This bench area is surrounded by a light partition and is divided into two sections—electrical and mechanical—for the overhaul of unit assemblies. The old car-body

shop had only two full-length tracks between which was situated the bench area. This shop has now been rearranged to provide facilities for further reconstruction work being carried out in connection with the new surface line rolling stock programme, and an additional track has been laid down so that the third road could be made available as a finishing road for the replacement of unit assemblies, which could become damaged during the painting of the car interior. New offices have been constructed in the shop, directly over the paint stores, as the original offices com-

to allow the introduction of mass-production methods. At that time, the number of cars to be dealt with was approximately 1,500, and it was decided that they should be overhauled in the case of motor cars after 50,000 miles running, and in the case of trailer cars after 70,000 miles running.

As a result of the generally improved condition brought about by a regular system of overhaul, improvements in design and changes in material specifications, it was found practicable to increase the mileage between overhauls progressively, and at present the average mileage run by the cars between overhauls is 200,000, with a time limit of four years. This time limit is necessitated largely by deterioration of the exterior and interior painting and the condition of the upholstery.

In 1925, the works was extended to deal with the increased number of cars, and advantage was taken of the opportunity to reorganise the whole works and introduce a complete system of progression.

The floor area of buildings at Acton works is 9½ acres and the total area, including sports ground, is 50 acres. The works comprise nine main shops, in which the general principle of progression is maintained from section to section. The overhaul system provides for the complete dismantling and re-assembly of the bogies and the mechanical and electrical equipment, the upholstery of the car seats, and interior and exterior painting.

As cars enter the works, they first proceed to the trimming shop, where all upholstery is removed, cleaned, repaired, and stored, until the overhauled car returns on its outward journey. The next stage is the lifting shop, where the service



Taping room, where female staff is employed

pleted before the war were destroyed by enemy action. The paint shop remains for the present as it was before the extension work began.

The present layout of Acton works is shown in the accompanying diagram, and a good idea of the expansion of facilities provided there is given by the two illustrations showing the extent of the works in 1928 and 1948. The works were erected in 1922 to deal with the heavy overhaul of the Underground companies' railway rolling stock, as, formerly, each railway had depended on its own workshop at the running depot. Cars had been overhauled on an inspection basis, though when the new works were opened, it was decided to overhaul cars on a mileage basis to provide a more economical cycle of repairs and

bogies are removed, and the body is placed on accommodation bogies, to keep it in a mobile condition. Traction motors are removed from the service bogies, which then are attached to a haulage chain and passed directly to the truck shop dismantling conveyor.

The truck shop has a dismantling conveyor on the north side, and an assembly conveyor running in the opposite direction on the south side. The repair sections are positioned at right angles to and between the two conveyors and are placed in the order in which parts are removed. After painting, the reassembled bogies are returned to the lifting shop for remounting the car body.

The car body, after being placed on its accommodation bogies, is passed through

the blow-out enclosure, for the removal of dust from the electrical equipment; it then passes, by means of a traverser, into the car-body shop, where any necessary repairs to the car body and its mechanical and electrical equipment are carried out. After reassembly of the overhauled equipment, the car passes to the paint shop. All roads in the paint shop are fitted with haulage chains and painting is done under movement; the time taken is approximately three days.

The next movement is to the finishing road, after which the car is transferred to the lifting shop where it is replaced on its service bogies and final testing carried out. The car is then ready to leave the works, the upholstery being replaced as it passes the trimming shop.

The traction motors, which were removed in the lifting shop, are passed to the motor shop for overhaul. This shop also deals with the overhaul of lighting

generators and rotary compressors, as well as traction motors for replacement purposes in the running depots, and a very considerable amount of work for other departments of the Executive, such as the power houses and sub-stations. In the taping room, which is situated in this shop, female staff is employed and the room is provided with canteen and rest room accommodation for their private use. Some 20 hands are employed in the room and are responsible to the foreman of the armature section of the motor shop, through a female chargehand. The total number of coils and other miscellaneous components produced in the taping room in 1947 was approximately 15,000.

Among the various other shops not directly concerned with the routine overhaul of cars is the wood shop, which comprises a section dealing with specially heavy repairs to car bodies, and a wood machine shop for supplying the necessary

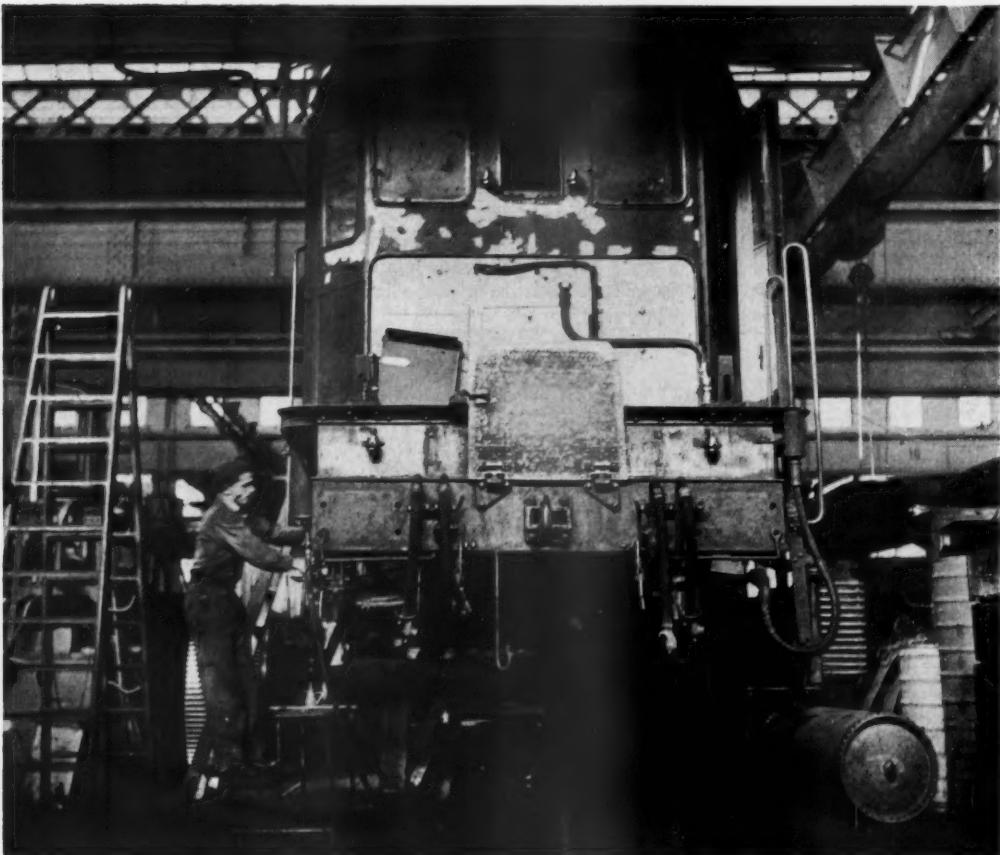
finished parts to the repair sections. Machined metal parts required in the overhaul shops are produced in a separate shop and a millwright's shop is concerned with the maintenance of plant, both at Acton works and in the various running depots.

In the experimental shop, prototypes of new apparatus designed in the drawing office are manufactured for use with new rolling stock, and other activities include the construction of full-size wooden models to give a greater appreciation of the features involved.

The following is a summary of some of the major items of Acton works planned annual production:

Overhauled cars	...	...	...	1,150
Heavy repair cars	...	...	...	100
Wheels turned ...	...	...	...	10,000 pairs
New tyres fitted	...	...	...	5,000
Traction motors overhauled	...	...	...	2,000
Motor suspension bearings re-metalled	...	...	...	6,250
Axle bearings re-metalled	...	...	...	12,500
Seats re-upholstered	...	...	...	450 car sets

Servicing a Swiss Electric Locomotive



Periodical overhaul of all locomotives and rolling stock of the Swiss Federal Railways is undertaken at six workshops, and locomotives sometimes cover 375,000 miles between major overhauls

Photo

"The Swiss Federal Railways Today"

CENSUS OF CONTAINERS.—The International Container Bureau has carried out a census of containers in Western Europe at the beginning of 1949. The figures received are incomplete, in particular those regarding containers privately owned in the countries where registration is not obligatory. France heads the list

with 27,570, followed by Great Britain with 19,960 and Western Germany with 19,150. The total is 75,000, with about 35 per cent. privately owned; and the remaining 65 per cent. are owned by railway administrations. About 72 per cent. of the containers referred to in the census answer to the particular specifications laid

down for acceptance for international railway traffic.

SCOTTISH ENGINEERING EMPLOYERS' ASSOCIATION.—The name of the North West Engineering Trades Employers' Association has been changed to that of Scottish Engineering Employers' Association.

Reorganisation of Acton Works, London Transport

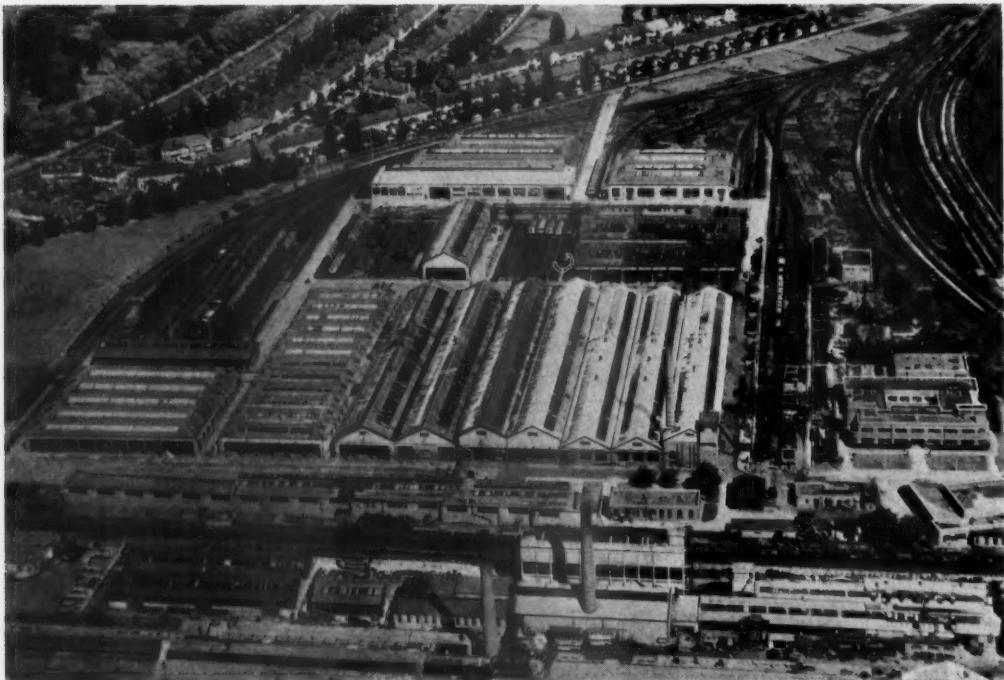


Re-arranged car-body overhaul shop at Acton, showing the section of the bench area dealing with mechanical equipment

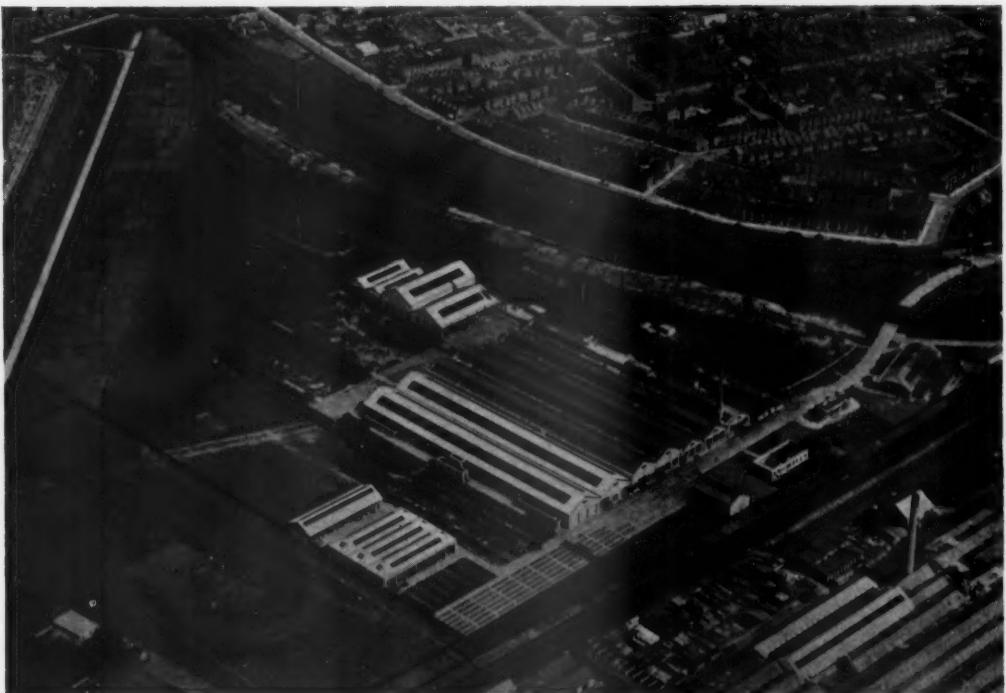


Car area of the new car-body shop, which has three full-length tracks and two bays, separated from the bench area by a partition

Reorganisation of Acton Works, London Transport

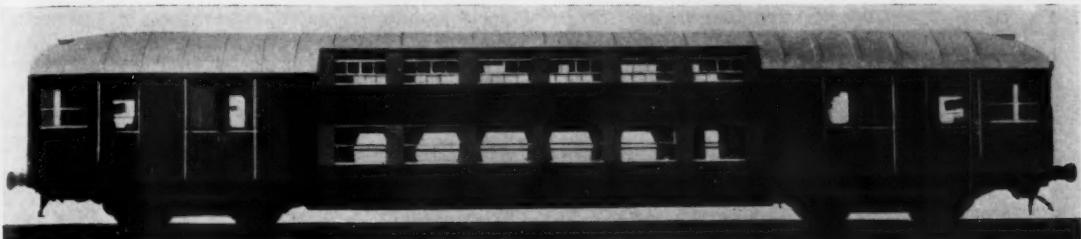


A recent aerial view of Acton Works. N. & S.W. Junction line in foreground ; District and Piccadilly lines at top right



Contrasting view from the south-west, taken in 1928, some six years after the opening of the works and three years after enlargement of the original premises

Double-Deck Railway Carriages



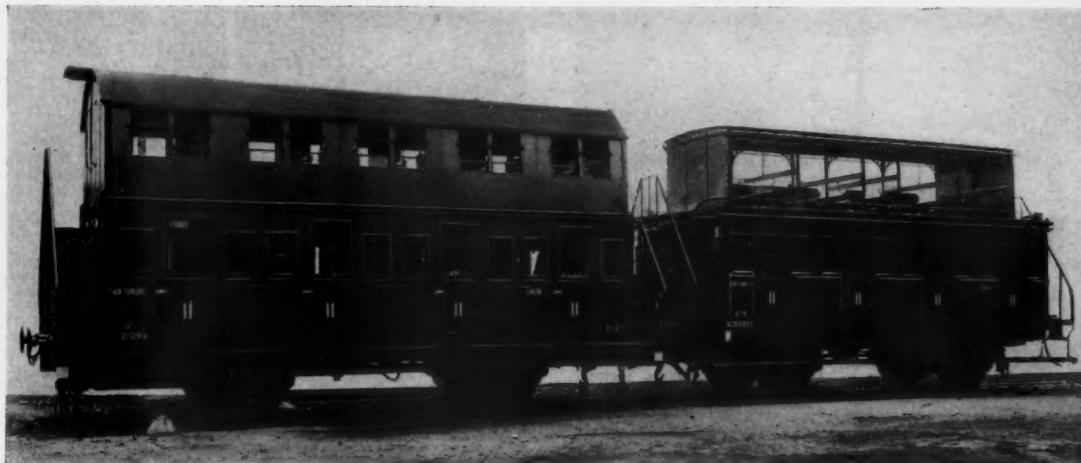
Double-deck coach built for the French State Railways during the year 1933 for outer suburban service in the neighbourhood of Paris



*Berlin suburban third class double-decker of the 1880-1900 period.
Such vehicles continued in use for workmen until about 1914*



*Paris suburban train of modern French
double-deck stock*



French second class suburban stock, built for the Western Railway. Left : The 1899 design, much of which survived in use until recently. Right : The 1879 design, most of which was withdrawn with the extension of electrification

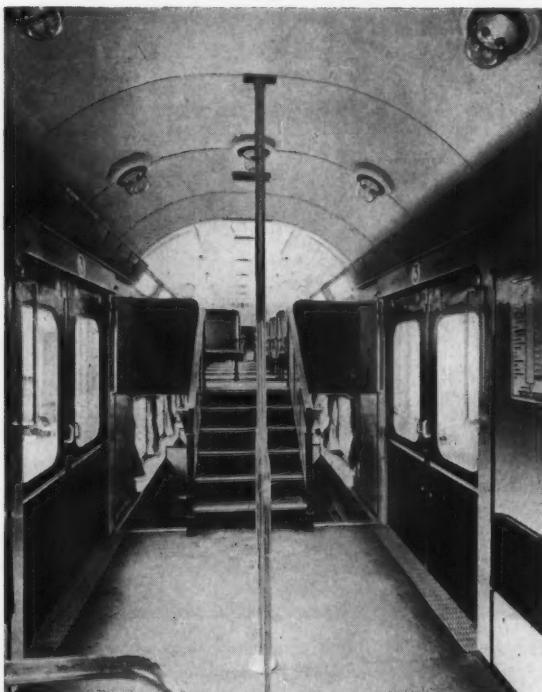
Double-Deck Railway Carriages



Modern experimental two-level coach in service near New York on electrified suburban lines



Earlier U.S.A. two-level arrangement on the Pennsylvania Railroad



Interior of modern double-deck Paris suburban coach, showing end vestibule approach



Arrangement of the experimental British two-level compartment, demonstrated last week

RAILWAY NEWS SECTION

PERSONAL

Mr. E. W. Arkle, Assistant Commercial Superintendent, Scottish Region, British Railways, has been appointed Commercial Superintendent, North Eastern Region. A portrait and biography of Mr. Arkle appeared in our March 12, 1948, issue.

Mr. W. H. F. Mepsted has been appointed Commercial Superintendent, Southern Region, British Railways, in succession to Mr. A. E. Hammett, who has been appointed Commercial Superintendent, London Midland Region, in place of Mr. W. P. Bradbury, retired. Mr. J. E. M. Roberts, Passenger Manager, North Eastern Region, becomes Assistant Commercial Superintendent, Southern Region, in place of Mr. Mepsted.

We regret to record the death on February 8, at the age of 63, of Mr. J. F. Pringle, Vice-President of the Central Region, Canadian National Railways.

The Minister of Civil Aviation has invited Marshal of the R.A.F. Lord Douglas of Kirtleside to become Chairman of the British European Airways Corporation in succession to Mr. Gerard d'Erlanger.

Lord Glenavy, Chairman, Great Northern Railway Company (Ireland), at the annual meeting in Dublin on February 25, said that Mr. J. G. Shanahan, the company's Accountant, was about to retire. In his long service with the company he had come to be recognised as in the very top flight of transport accountants. He had agreed to act as consultant should there be financial discussions arising out of the re-organisation of public transport in Ireland.

Mr. F. T. Knaggs, hitherto District Engineer, Umtali, Rhodesia Railways, has been appointed Deputy Chief Engineer (Housing).

Mr. R. M. T. Richards, Deputy Chief Regional Officer, Southern Region, British Railways, has been invested as an Officer of the Order of St. John of Jerusalem.

Mr. R. C. Bucquet, C.B.E., General Manager of the Nyasaland Railways and the Trans-Zambesia Railway, who, as recorded in our February 4 issue, is retiring, was born at Croydon and educated at Sevenoaks School. He commenced his railway career in the General Manager's Office of the Barry Railway in 1908. In 1912 he joined the Rhodesia Railways. He entered the service of the Nyasaland Railways and the Trans Zambesia Railway in 1923, and was appointed General Manager in 1941. In the 1914-18 war Mr. Bucquet served with the B.S.A.P. Service Column (Norforce) and the Royal Scots Fusiliers. During the recent war he was Controller of Shipping & Railways, Nyasaland.

Mr. A. P. Reynolds, who, as recorded in our last week's issue, has resigned his position as Chairman of Coras Iompair Eireann (Irish Transport Company), is an accountant by profession. He was born in 1895, and was educated by the Christian Brothers at O'Connell Schools, Dublin. He joined the firm of John R. Reynolds & Company, and later became Senior Partner in Reynolds, McCarron & Company. He was interested in road and

between Ireland and England. He was a Director of Irish Air Lines and other companies.

Mr. C. P. Madely has been appointed Manager of the Montreal Locomotive Works Limited.

Mr. J. Morris, who was for many years Works Manager of the Crewe works of Rolls Royce Limited, has taken up an appointment as Director of Technical Research & Development with Sentinel (Shrewsbury) Limited.

INDIAN RAILWAY STAFF CHANGES

Mr. A. Bakrshana has been appointed to officiate as Financial Adviser & Chief Accounts Officer, Madras & Southern Mahratta Railway.

Mr. B. Moonarayan, Traffic Superintendent, Bombay, Baroda & Central India Railway, has been appointed to officiate as Chief Traffic Manager of that railway.

Colonel R. J. Walker, O.B.E., R.E., who has been appointed an Inspecting Officer of Railways in the Ministry of Transport, was commissioned in the Royal Engineers in 1923. After a period of service in England, he was posted to Maaya in 1927, and in 1929 went to Japan, where he was attached to the British Embassy until 1932. He became a 1st Class Interpreter in Japanese, and was attached to an Engineer Battalion of the Japanese Army, and later to the staff of the School of Mechanical Transport in Tokyo. In 1932 he went to China, where he acted for a time as D.C.R.E. Returning to the United Kingdom in 1934, he was appointed Assistant to the C.R.E., Northern Ireland. In 1936, he was posted as Adjutant to the Railway Training Centre, Longmoor, where he was still serving at the outbreak of war, when he became Assistant

Commandant. Colonel Walker was appointed at the end of 1940 as D.A.Q.M.G. (Movements), and served at Salisbury and in Scotland. In 1941 he went to Northern Ireland as A.Q.M.G.(M.), where he was in charge of military rail, road and sea movement. In 1943 he was in charge of Movements in South Eastern Command, where preparations for the invasion of Normandy were in progress, and at the end of the year he went for special duties to the American Headquarters, E.T.O., U.S.A. In January, 1944, Colonel Walker was appointed a Deputy-Director of Personnel Movements at the War Office, and was responsible for all military personnel movements by rail in the United Kingdom and by sea to the Continent and other places served by short sea routes. His duties also included the planning and use of hospital shipping throughout the world. In 1946 he left the War Office, and he was later seconded for a year, through the Foreign Office, to the



Lafayette

Dublin

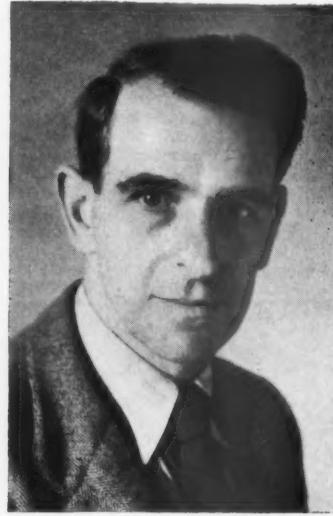
Mr. A. P. Reynolds

Chairman, Coras Iompair Eireann, 1945-49

air transport, and became Managing Director of the General Omnibus Co. Ltd., the largest of the independent Dublin bus concerns which were acquired when a monopoly of passenger transport in the city was granted to the Dublin United Tramways Co. (1896) Ltd., afterwards the Dublin United Transport Co. Ltd. In 1936 he was appointed General Manager of the tramways company. He became Managing Director of the Dublin United Transport Co. Ltd. in 1941; and he was appointed Chairman of the Great Southern Railways Company early in the next year. When Coras Iompair Eireann was formed by the amalgamation of the Great Southern Railways Company and the Dublin United Transport Co. Ltd., and came into existence on January 1, 1945, under the provisions of the Transport Act, 1944, Mr. Reynolds was appointed Chairman. He was a member of the Government Advisory Committee on Aviation, and was associated closely with the establishment of the first regular air services

**Colonel R. J. Walker**

Appointed an Inspecting Officer of Railways, Ministry of Transport

**Dr. F. F. C. Curtis**

Appointed Architect to the Railway Executive

**The late Mr. C. M. Jacobs**

Signal Engineer, Great Western Railway, 1928-36

Venezuelan Government as its Transportation & Railway Adviser. He went to Venezuela in 1947, and, after an extended study of the transport system of the country, duly reported and advised on it, with particular reference to the economic and technical aspects of the railways. He returned home in 1948, and, retiring from the Active List of the Army, accepted his present appointment with the Ministry of Transport.

Dr. F. F. C. Curtis, Dr. Ing., A.R.I.B.A., who has been appointed Architect to the Railway Executive, has been Architect to the Great Western Railway and the Western Region since March, 1947. He was born on August 9, 1903. He served for a period as Assistant in the Architect's Office, Southern Railway, and from 1934-36, as Assistant in the office of Adams, Holden & Pearson, F.F.R.I.B.A., Consulting Architects to the L.P.T.B. In 1936 he was appointed Lecturer in Liverpool University School of Architecture, which appointment he held until taking up his duties with the G.W.R. In 1940 and 1941 Dr. Curtis was with Sir Alexander Gibb & Partners on construction of Royal Ordnance factories and hostels for munition workers; and during the first half of 1942 was Deputy to Chief Labour Allocation Officer, Ministry of Works. From July, 1942, to December, 1945, he saw service with the Royal Engineers. He served as staff officer at G.H.Q., India Command, and held the rank of Major at the time of his release from the Army.

Mr. C. M. Jacobs, whose death, in his 81st year, we recorded last week, was Signal Engineer of the Great Western Railway from 1928 to 1936. He entered the Telegraph Department of that railway in 1882. On the amalgamation of the Telegraph and Signal Departments in 1903 he was appointed Electrical Assistant to the Signal Engineer. In 1923 he became Assistant Signal Engineer, and, in 1928, Signal Engineer, from which position he retired in 1936. In 1913 Mr. Jacobs was one of a small delegation sent to the U.S.A. to report on American signalling practice. On his own account, or in conjunction with others, he invented, or helped in the development of, various telephone and signal

equipment, and was closely concerned with the development of the G.W.R. system of automatic train control.

SIR RALPH COPE MEMORIAL SERVICE

A memorial service for Sir Ralph Cope (Chief Accountant, Great Western Railway, 1916-38) was held on Friday, February 25, at the Parish Church of St. James, Sussex Gardens. The Rev. G. T. Chappell officiated. The order of service was:—Hymn 401 (A. & M.); Psalm XXIII; Lesson, Rev. VII 9-17; Hymn 27 (A. & M.); Jerusalem (Hubert Parry); the Blessing; Dead March in Saul. The choir was composed of Western Region staff, drawn from the Chief Accountant's and other offices, with Mr. George Orton as organist.

The Rev. G. T. Chappell, Vicar of Paddington Parish Church, in an address, described Sir Ralph Cope's long and distinguished service with the Great Western Railway Company and his many sterling qualities. He stressed the love of industry and fidelity to ideals of public service which had enabled Sir Ralph Cope, with others like him, to build up a tradition which had made the British railway system the admiration of the world. His career had demonstrated that service must be an expression of personality, and that all who join in it as a team realise a vocation greater than the contribution of any single one. Sir Ralph Cope had left behind him affection, esteem and a desire to catch something of his secret.

Those present at the service included:—

Lady Cope; Mr. and Mrs. Angus Todd (son-in-law and daughter); Viscount Portal (formerly Chairman, G.W.R.); the Earl of Dudley and Sir Edward Cadogan (formerly Deputy-Chairman, G.W.R.); Lord Palmer; Messrs. S. B. Taylor, Deputy Secretary, British Transport Commission; David Blee, Member, Railway Executive; George Morton, Chief Financial Officer, V. Radford, Assistant Chief Financial Officer, and J. W. J. Webb, Assistant to the Chief Financial Officer on Expenditure, Railway Executive.

Western Region: Messrs. K. W. C. Grand, Chief Regional Officer, and Mrs. Grand; H. H. Phillips, Assistant Chief Regional Officer; H. E. Hedges, General Assistant to Chief Regional Officer; H. G. Bowles, Assistant to Chief Regional Officer; Major J. Dewar, Publicity Officer (representing also Mr. A. W. Woodbridge, Signal & Telegraph En-

gineer, and Mr. C. J. Rider, Commercial Advertising Agent); S. Gray, Chief Clerk to Chief Regional Officer; W. G. Roberts, Office of Chief Regional Officer; M. H. B. Gilmour, Solicitor; C. R. Dashwood, Chief Accountant; H. T. Forth, Assistant Accountant; A. G. Pollard and A. W. Tait, Assistants to Chief Accountant; R. Burgoyne, Regional Staff Officer; C. Furber, Commercial Superintendent; H. W. Howard, Claims & Salvage Agent, Commercial Superintendent's Office; Gilbert Matthews, Operating Superintendent; S. G. Hearn, Assistant Operating Superintendent; K. C. Griffiths, Staff Assistant to Operating Superintendent; H. G. W. Gault, New Works Assistant to Operating Superintendent; J. F. Cole, Chief Clerk to Operating Superintendent; C. W. Powell, London Divisional Superintendent; A. S. Quartermaine, Chief Engineer; F. C. Hockridge, Surveyor & Estate Agent; W. N. Connah, Treasurer; D. J. Swain (representing Mr. F. R. E. Davis, formerly Secretary, G.W.R.); G. Sturman (representing G.W.R. (London) Athletic Association); N. Harland, Western Region Savings Bank; C. Needham (formerly of G.W.R. General Manager's Office); A. S. Mills, former London District Goods Manager, G.W.R.; J. C. Harris, former Chief Clerk, Solicitor's Office, G.W.R.; S. H. Dunton, formerly of Audit Office, Western Region; J. J. Green, formerly of Chief Accountant's Office, G.W.R.; and Chief Accountant's and Audit Office staff.

Others Attending

Messrs. W. R. Candlin, Assistant Accountant, London Midland Region; F. H. Sedgwick, Accountant, Eastern & North Eastern Regions; F. R. Stockdill, Accountant, Southern Region; W. J. Sawkins, former Chief Accountant, Southern Region; R. G. Davidson, former Chief Accountant, S.R.

Sir Reginald Hill, Chairman, and Mr. S. E. Clark, Secretary, Docks & Inland Waterways Executive; Messrs. George Cardwell, Deputy-Chairman, Road Transport Executive (representing Road Transport Executive); George Orton, Public Relations Officer, Road Transport Executive; L. C. Hawkins, Member, C. G. Page, Secretary & Chief Legal Adviser, and P. G. James, Chief Accountant, L.T.E.

Messrs. T. J. Lynch, Secretary, Railway Clearing House; Sir Alan Rae Smith and Mr. Lawrence Culshaw, of Deloitte, Plender, Griffiths & Company; Sir Lynden Macassey; Sir William Stanier; Sir Martin Hall, representing Hatfield; Messrs. A. E. Overton (representing Carter Paterson & Co. Ltd. and Mr. James Paterson); R. Semple (representing Pickfords Limited); J. A. Kay, Editor, *The Railway Gazette*.

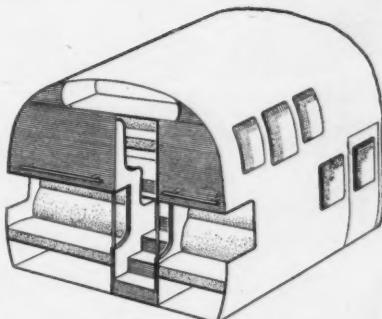
Experimental British Double-Deck Train

Ingenious Southern Region design for experimental use, initially on London-Dartford service

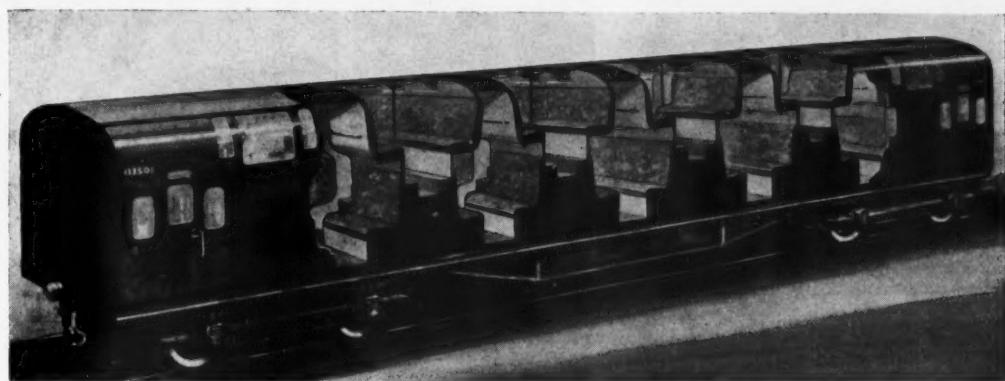
Further details were given last Friday by Sir Eustace Missenden, Chairman of the Railway Executive, of the experimental train of double-deck coaches, with more seats per coach than has been possible before, that is being considered by British Railways for use on the Southern Region lines between London and Dartford. A "mock-up" facsimile of what one compartment will look like when completed, was exhibited to the Press at Marylebone Station, London, and gave a good idea of the way in which nearly four seats have been provided in the space used normally by three seats. For the benefit of those unfamiliar with the term,

we may say that "mock-up" is a term of American origin which has been adopted by the motorcar body-building industry to denote a full-size model, made of easily-worked materials, for practical demonstration of seating clearances, etc.

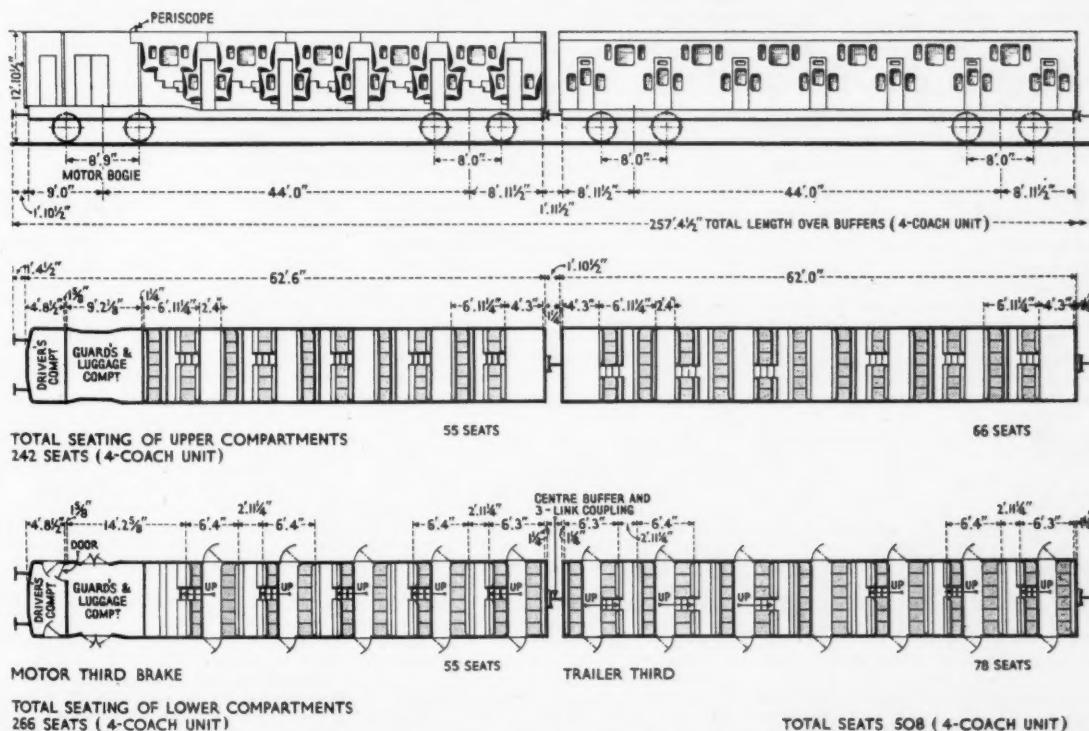
A double-deck electric train of 8 coaches would have a total seating capacity of 1,016 seats, equivalent to a 31 per cent. increase in seating capacity over a normal 8-coach electric train consisting of six open vehicles and two compartment-type vehicles, and this expedient is now being considered by the British Transport Commission, on the recommendation of the Railway Executive, as an alternative to



Isometric sketch of two-level compartment



Artist's impression of trailer-coach design for British Railways



Seating plan of half a four-coach unit of the new British Railways two-level stock. Two units would compose a standard train seating 1,016 passengers



Views of the "mock-up" compartment exhibited by the Railway Executive at Marylebone last Friday. The right-hand picture shows (left to right) Sir Eustace Missenden, Mr. R. A. Riddles, Mr. O. V. Bulleid, and Mr. John Elliot

the costly engineering works involved in providing for longer trains. Such works include lengthening platforms and altering the signalling and layout of junctions.

Existing types of double-decker in other countries, including the U.S.A., were examined, but proved impossible of adaptation to British conditions, as our platforms are higher and our loading gauges are more restricted than those in most other countries. The Chief Mechanical Engineer of the Southern Region has now produced at Lancing Works the prototype which is the basis of the present

proposals. The train is planned to consist of two standard 4-car sets, each composed of two motor third brakemen with 5 double compartments giving seats for 110, and two trailers. In the trailer coaches there will be 6 double compartments, each with 11 seats on the lower deck and 11 seats on the upper. Thus, one door leads to 22 seats. There is also a "buffer" compartment on the lower level only, with seats for 12. Each coach thus will seat 144 persons. Accordingly, the total capacity of a 4-car set will be 508, as shown, and of a complete train 1,016.

By reason of close clearances of bridges and tunnels, the windows for the upper level will be fixed, but electrically-operated fans will provide constant air flow in the upper part of the compartment. The doors and windows of the lower deck will be of the normal kind. Strip-lighting over the seats will help those seated to read without interference from the shadow of passengers standing or moving from one part of the coach to another. Grab handles will assist movement between the two decks and also standing passengers on the lower level.

Pre-Stressed Concrete Design

The increasingly-important part played by pre-stressed concrete in modern engineering construction has become generally recognised. The study of the subject has been developed over many years, and further investigations are now being undertaken, notably, so far as Great Britain is concerned, by the Building Research Board, Department of Scientific & Industrial Research. An opportunity for discussing the technical problems involved was afforded at a conference arranged by the Joint Committee on Materials and their Testing of Technical Institutions & Societies in Great Britain, and held on February 16, under the auspices of the Institution of Civil Engineers.

The conference opened with a paper by Dr. F. G. Thomas, who recalled the progress achieved in concrete construction since the first use of reinforcement by Monier, a Paris gardener, in 1861, and passed on to a review of the present position of pre-stressed concrete design. Considerable attention was given to methods of design and construction, and numerous examples were quoted of pre-stressed concrete structures of various types, both in this country and abroad. Dr. Thomas emphasised that a stage has now been reached

in the development of pre-stressed concrete in which the stress magnitude and distribution can be assessed with reasonable accuracy, both at the time of construction, and at any later date. There is, in fact, every hope that the structures already built will give satisfactory service.

RAILWAY SLEEPERS

Of particular interest to railway engineers were the references to concrete sleepers, especially as Dr. Thomas has contributed to the development of a successful design. For main-line conditions, it has been found that pre-stressed concrete sleepers have advantages over those made from ordinary concrete. The standard sleeper for primary track in Great Britain is the Dow-Mac Class "E," which was designed by the Prestressed Concrete Company, and is manufactured by the long-line pre-tensioning process. The Stent sleeper, also designed for use in main lines, has pre-tensioned steel with positive anchorage; the individual-unit method is used in its manufacture.

Two types of pre-stressed sleeper are used in Belgium. The Blaton sleepers, designed by Magnel, are made in pairs, with pre-tensioned $\frac{1}{2}$ -in. dia. steel links, with positive end anchorage. The Franki sleeper, designed by Bagon, consists of two

end blocks, and a central block, cast separately, and tied together by a post-tensioned steel bar passing centrally through the sleeper, and anchored at its ends.

A resilient pad is inserted between each end block and the central block. Freyssinet has designed a sleeper similar to the Stent sleeper, except that 1 in. dia. wire is used in a large number of loops.

DESIGNERS OF ALUMINIUM STRUCTURES.

—The firm of Head, Wrightson & Co. Ltd., Thornaby-on-Tees, has acquired the businesses of F. J. & L. Dean, Slough, Bucks., consultants in aluminium fabrication, Aldean Designs Limited, Slough, designers of aluminium structures, and D. J. Hawkins & Sons Ltd., Henley-on-Thames, fabricators in aluminium. These businesses are being amalgamated with their subsidiary, Head, Wrightson Light Alloy Structures Limited, designers and builders of the first aluminium alloy bascule bridge in the world erected at Sunderland. The latter company will be known as Head Wrightson Aldean Limited, with headquarters at 61, Windsor Road, Slough.

Great Northern Railway Company (Ireland)

Decline in revenue—Tax windfalls—Increased expenditure—Efficient working—Future of railway

The annual meeting of the Great Northern Railway Company (Ireland) was held at the Gresham Hotel, Dublin, on February 25. Lord Glenavy, Chairman of the company, presided. The Chairman said that the results for the year had worked out no better than had been expected at the extraordinary meeting last July. Gross receipts in 1947 were £3,411,843 and in 1948 £3,728,931, an increase of £317,088. Despite that increase, net earnings, which in 1947 were a credit of £102,133, were in 1948 a deficiency of £72,454, or £174,587 worse.

The deficiency of £72,454 in 1948 was arrived at after transferring £42,000 more to contingencies than in 1947, the increase in the transfer being necessitated by the position of the pension fund. Omitting the increase in this transfer, the comparison of results between 1947 and 1948 would be a deficiency of £30,454 in the latter year as against a credit of £102,133 in the former.

The increases in the main items of expenditure, for the completed year, were:—

Salaries and wages	... ...	£276,000
Coal and oil	... ...	£77,000
Materials for repairs and renewals of permanent way and works	... ...	£43,000
Materials for repairs and renewals of rolling stock	... ...	£41,000

These items accounted for £437,000 out of the total increase in expenditure of £479,602 which fell in approximately equal parts on each half of the year. The increase in gross receipts was no more than £317,088, of which only £55,000 was secured in the second half, because of a fall in the volume of traffic.

SOURCE OF DIVIDEND

That a dividend was available for the guaranteed stock was due to two non-recurrent windfalls which came in to supplement the revenue. Liability to excess profits tax in the North during the war years was finally determined in 1948. In the final result there was found to have been an over-provision of £44,606. This sum represented less than 9 per cent. of the total amount of tax, over £500,000, for which the company ultimately was held liable.

The second windfall occurred under the heading of income tax. The results for 1948 being adverse, the provision required for tax was small, and less than the tax deductible from the interest on debentures and the dividends on the guaranteed stock. Therefore, the income tax item on this occasion showed a credit of £32,983. Such a credit would not recur, because in the current year, which must be expected to end again in a deficiency, there would be no tax-paid provision against which to set the tax deducted from the interest on debentures, and the tax so deducted must be accounted for to the authorities.

The two sums explained, together with the carry-forward, had sufficed to offset the deficiency and pay the guaranteed dividend, but the balance forward to 1949 was reduced to £7,787.

No blame for the results of 1948 could be attached to the company. Timely warning of their probability was given publicly to all parties concerned at the meeting last July. It was, perhaps, not fully understood how numerous those parties were and how little real discretion in the conduct of the undertaking was left. The company had to import all its main requirements of equipment, fuel, and

materials. Controls in the exporting country regulated the prices, quantities, and deliveries of most of these imports. Domestic customs or revenue duties might also affect their price and import licences their quantity.

The level of salaries and wages had come, for practical purposes, to be fixed by boards and tribunals and courts which also, by prescribing conditions of employment, in effect determined the number of staff to be engaged. Other authorities exercised control over rates and charges, and decided whether a service was to be maintained or withdrawn. Precedents had been set by other transport organisations which this company had been required to follow, although it had been shown that they were embarrassing even for their originators. These varied agencies, some of which were duplicated by reason of the company's geographical location, had been acting for some years without co-ordination between themselves, and in particular without responsibility for the financial consequences of putting their rulings into effect. For the discharge of such responsibilities as did remain with the company the Milne report gave it a clean and creditable sheet.

RESOURCES NEARLY EXHAUSTED

Present conditions would not have to prevail long for the resources to be exhausted which shareholders with prudence and sacrifice had been accumulating. It was possible that in the current year receipts might not be sufficient to balance even working expenditure. Receipts so far had fallen, while there had been another rise in the price of coal, and salaries and wages were running still higher than in 1948. The investments representing the depreciation funds were the only source available to draw on for meeting deficiencies. It should be understood, however, that commitments had had to be incurred for capital developments, such as earned commendation in the Milne report, but would leave, when discharged, little or nothing in the investment portfolio. As the accounts showed, more than £1½ millions out of the depreciation funds had already been ploughed back into the business for development purposes, and over half a million pounds, of necessity, was taken out of investments and cash in 1948 alone.

For a period which now exceeded a century this company had had the duty, and, if it were efficient, had been able to earn the means of paying its own way. Its only source of income was its obtainable receipts. Now that expenditure had been raised above them by agencies administering public policies of which Great Northern solvency was no direct concern, the earning of the means to accomplish that duty was no longer in its power. However willing the company was to follow the requirements of public policy, the one feat no one could expect of it was the continued provision of transport services substantially below their true cost.

The stockholders were clearly entitled to say that they had performed with efficiency, as the Milne report testified, the functions prescribed for them by Act of Parliament. If other Acts of other Parliaments were now to prescribe other functions for public transport, stockholders had the right to claim an honourable discharge and full equity for the great and well-

preserved investment of which their successors would be able to avail.

Recent Government announcements were not specific in relation to the course which it was intended to follow in the affairs of this company. The board's inference from the announcements was that, following the general line of the Milne report, when decisions were completed on the re-constitution of C.I.E., proposals for the acquisition of Great Northern holdings would accompany them.

In the course of the week an invitation had been received to submit observations on the Milne report as it bore on this company. Subject to the views of stockholders, the board would propose to suggest that observations relating to the company's special position should in the first stage be presented at interviews. That would seem the most practical way of finding a clear road through the inherent complications.

TRIBUTE TO OFFICERS AND STAFF

Any further meetings were likely to be special meetings, concerned with the position under a transport re-organisation; this might be the last opportunity of saying one thing which ought to be said. That the company had earned credit in the Milne report was due in large measure to the officers and staff of the company in their four generations. They had been enduringly animated by that spirit of efficiency, energy, and conscientiousness which made their work something more to them than the mere burden of the day and which to observers had stood out as a special attribute of the Great Northern. In this generation they had had to grapple with, if they could not altogether overcome, exceptional handicaps and obstacles which might have dispirited the most courageous.

One of the present team of officers was about to retire, the Accountant, Mr. Shanahan. In his long service with the company he had come to be recognised as in the very top flight of transport accountants. There was no officer with whom the directors were in closer contact, nor on whom they have to rely more implicitly, than their Accountant. Mr. Shanahan had never failed them, and his long management of the company's finances had been a masterly combination of care and foresight. They would all wish him peace and leisure now, were it not that he had agreed to act as consultant should there be financial discussions arising out of the reorganisation of public transport, and that those discussions might not, for a time, afford him much of either.

104 YEARS OF SERVICE

There was some sadness, there had to be some regret felt by all, in having to expect that the curtain was about to be rung down on the old Great Northern Railway Company of Ireland. For 104 years it had played an honest and capable role in public service. If it was now to leave the stage it would do so with its vigour unimpaired, as ready as ever to perform the part which was written for it in its constitution. Not the least of the contributions it was making to the future was the light which its particular record enabled the Milne review to throw on the strains in public transport between policy and economics. Students would have noted the implication in that review that to relieve the strains efficiency was not enough.

The report and accounts were adopted.

Parliamentary Notes

British Transport Commission Bill

In the House of Commons on February 22 Major James Milner (Chairman of Ways & Means) formally moved the second reading of the British Transport Commission Bill.

Mr. A. J. Boyd-Carpenter (Kingston-on-Thames—C.) called attention to clause 5, which provides for certain works; the particular works he had in mind were those specified as "Work No. 1"—the widening of the District Railway. As he understood it, the proposal was for a widening for only 1,600 yards in the borough of Ealing; and it seemed to him that the mere widening of the track in some of the outer sections could not but have as its short-term effect an increase of congestion in Central London. It would accentuate what was indeed the most dismal farce in the whole of London's transport—the interaction of the Inner Circle line upon the District Railway. The Inner Circle might be described as the last remaining piece of medieval London.

There were two provisions in the Bill for increasing charges to the public. The first was for an increase of dock charges at Hull. Then there was an unfortunate provision in a later clause that the Transport Commission should increase the charge it made to the Metropolitan Water Board for water. In view of the Government's policy of asking private businesses to hold prices where they were, it seemed odd that the first private Bill promoted by the first nationalised industry to submit one included a clause providing for an increase in the price of a necessity of life.

Mr. Boyd Carpenter asked the Minister for a statement as to the position concerning workmen's fares.

The general financial position of the railways, despite recent severe increases in fares, was far from satisfactory. The unsatisfactory position was accentuated by the fact that large and substantial wage claims were still in issue. There was a fantastic waste of money in certain of the advertising in which the Railway Executive indulged.

Mr. Boyd Carpenter said he understood that, notwithstanding the fall in traffic, there had been quite a substantial increase in staff. The figures he had of the staff at the beginning of the year were 782,295, and the latest figures, towards the end of last year, showed that they had risen to 807,824.

Mr. Ernest Davies (Enfield—Lab.) said it would be welcome to all Members representing London, and, in particular, Greater London, constituencies if the findings of the working party regarding the proposals for the extension or improvement of railway facilities in and around London were published.

What concerned him most about the nationalised transport system generally was the loss of traffic to the railways as a result of the sharp increase in fares at the end of 1947.

The chief way to attract back railway traffic was to increase progressively the cheap fare facilities and to remove the restrictions on them. The second way was to reduce the cost to the daily traveller to work. Referring to goods traffic, Mr. Davies said that there, again, the problem was one of high charges. One of the indications was the great increase in the issue of "C" licences, which had nearly doubled since 1938. What was the position of the charges scheme which, under the Act, had to be drawn up? Was it possible for interim schemes to be made and interim action to be taken?

Mr. F. J. Erroll (Altrincham & Sale—C.) complained of the facilities at Holyhead harbour. Despite the introduction of sailing tickets to prevent undue congestion there, on a number of occasions something seemed to go wrong with the arrangements.

He would like to draw attention to the growing habit of the uniformed railway staff of making use of the passenger refreshment facilities at the principal stations.

Mr. Erroll said that all who had noticed what had been taking place were delighted at the progressive outlook which the Railway Executive was taking about engineering matters. He urged the Executive to cut down the number of design committees and allow a few original thinking men to have their heads and go ahead in the right way. With electrification he thought they were in danger of falling over themselves backwards. Electrification of the traditional type had been all right in the early twenties, and maybe in the thirties; but because it was all right for dense suburban lines it did not follow that a system of electrification was the right thing for a modern British railway. Great advances had taken place in the design and development of motive power; he need hardly mention the diesel-electric locomotives which were being tried out—one of the last developments of the old L.M.S.R. There was also the possibility of using gas-turbine-driven locomotives.

Sir John Mellor (Sutton Coldfield—C.) drew attention to the position of railway pensioners who drew their pensions on a pre-war scale and who were suffering serious hardships.

Mr. G. H. Walker (Rossendale—Lab.) referred to the statement by Mr. Erroll about trains being late, and said they must not overlook the fact that many trains were held up at different points because of work such as the laying of new lines.

Sir Patrick Hannon (Birmingham, Moseley—C.) said that the Minister should give special consideration to the old servants of the railways and canals.

Mr. G. B. Drayson (Skipton—C.) asked for a definite guarantee from the Minister that he had no intention of putting up bus fares. He also asked the Minister to extend the period of the monthly ticket, and to consider extending the half fare rate to coincide with the school leaving age.

Mr. A. J. Champion (Derby Southern—Lab.) declared that those who said they had not seen any improvements in the railway service as a result of nationalisation must surely be blind.

Mr. Peter Thorneycroft (Monmouth—C.) said that if ever there was a time when the railways ought to be running at a profit, it was now.

Mr. Alfred Barnes (Minister of Transport) said he did not think Parliament or public took sufficiently into consideration the fact that the nation had completely subordinated railway affairs, managements and interests to national requirements during two wars, and particularly the last war. The Government of that day had made no arrangements nor financial provisions to enable whatever management emerged after the war to achieve its price levels with the moving price levels in the community. That had had the effect of confronting the railway administration with one complete increase in charges to try and meet costs. The price of coal, timber, steel and all major requirements had been rising steadily throughout the war, but the Government had done nothing to meet that situation, nor had it allowed the railways, which were performing a first class military task, to keep the rolling stock and permanent way up to a state of

efficiency. It was exceedingly unfortunate, if the service had suffered more than the normal business interests in this country, that it should now be subjected to unfair and inconsiderate criticism.

Mr. Barnes said he took the responsibility for the increased fares and charges before nationalisation, because he did not consider it fair to place the responsibility on any body of persons called on to carry out that task. But even today the increase in fares was only 55 per cent. over 1939, as compared with an increase of over 100 per cent. in the price of the major commodities the railways had to use. The weight of capital expenditure for the railways was so much heavier than the weight of expenditure for road vehicles that it enabled comparable road vehicles to operate at a level of charges against which no railway administration could compete. The old companies had tried to get over the difficulty by purchasing an interest in the road passenger and haulage undertakings, but the process had not been sufficiently quick to enable them to catch up with their financial arrears due to the rapid growth of road transport. The policy of the Government had been to accelerate what was taking place, namely, private unification, when it has introduced the nationalisation proposals, the policy behind which was not to interfere with the choice of service by the individual, but was, eventually, to co-ordinate the whole of the transport services of certain kinds—not "C" licence transport and short distance haulage transport—and by that process eventually to pool the receipts from all forms of transport, so that in the final result the Commission could pay its way irrespective of whether any particular section was able to run at a profit. The only alternative was that the railways should be subsidised direct by the Exchequer.

Existing road passenger services were dealt with by the conditions attached by the quasi-judicial licensing authorities, when they granted a road passenger service licence, and neither the Minister, the House, nor the Commission could at the present moment deal with the problem of bus fares. No individual had any authority to make any statement about what railway, bus, or any other type of fares would be until that procedure had been complied with.

Concerning the London transport system, Mr. Barnes said whenever there was an improvement it was assumed that overcrowding would cease to exist. The growth of London's population, the increasing habits of travel, the spreading out of the population, and the longer journeys had always outstripped the facilities. Since the war some 30 miles of additional electrification and extension of the tube system had taken place, and there were some 28 more miles still in the course of construction. He believed that the bulk, if not the whole, of that additional 28 miles would be completed this year. The present capital cost of new extensions was approximately £14 million.

The staff of the Commission was small and many had been drawn from the existing railway service. He would put the problem of redundancy in this way: he had had the experience of examining the problem when it was under the control of four general managers of the main-line railways, and had seen then that the railways had been through the experience of any big organisation. Many of their experienced personnel had been called up and temporary staff—both men and women, but primarily women—brought in. With demobilisation, men had to be taken

back, and it was a little time before the wartime personnel could be removed, the staff made smaller, and the organisation brought back to a healthy condition. He thought the Commission was handling that with due consideration of all the circumstances involved. It did not want to dismiss thousands of persons ruthlessly, but there was no doubt that the total number employed in transport was more than necessary.

The Bill was read a second time.

Valuation of Road Transport Shares

Under an agreement dated November 5, 1948, the B.T.C. acquired the interests of Thomas Tilling Limited. Certain of the companies in this group include minority shareholders, and it has always been the intention of the B.T.C. that such should have an opportunity of selling their holdings at prices linked as closely as possible to the price paid for the interests of Thomas Tilling.

The Commission, therefore, instructed the firm of Deloitte, Plender, Griffiths & Company, Chartered Accountants, to advise on the prices which they consider to be fairly and reasonably in accord with the terms of the general settlement made between the B.T.C. and Thomas Tilling. The accountants now report that in their opinion the undenoted prices are fairly and reasonably in accord with the previous settlement:—

Name of company	Price per share £ s. d.
Bath Electric Tramways Limited	
5 per cent. cumulative preference shares of £1 each	1 3 6
Preferred ordinary shares of £1 each	2 15 3
Deferred ordinary shares of £1 each	8 10 6
Bristol Tramways & Carriage Co. Ltd.	
4 per cent. preference shares of £1 each	1 1 0
Ordinary shares of £1 each	4 11 6
Caledonian Omnibus Co. Ltd.	
Shares of £1 each	6 2 9
Crossville Motor Services Limited	
Ordinary shares of £1 each	4 8 9
Cumberland Motor Services Limited	
Ordinary shares of £1 each	5 10 9
Eastern Counties Omnibus Co. Ltd.	
Ordinary shares of £1 each	5 6 0
Hants & Dorset Motor Services Limited	
6½ per cent. cumulative preference shares of £1 each	1 9 6
Ordinary shares of £1 each	4 11 6
Lincolnshire Road Car Co. Ltd.	
Ordinary shares of £1 each	7 12 6
National Omnibus & Transport Co. Ltd.	
7 per cent. cumulative preference shares of £1 each	1 10 0
Ordinary shares of £1 each	4 6 6
Norwich Omnibus Company	
Shares of £10 each	9 18 9
Otley Omnibus Stations Limited	
Shares of £1 each	1 0 0
Thames Valley Traction Co. Ltd.	
Ordinary shares of £1 each	6 5 9
Tilling Motor Services Limited	
10 per cent. cumulative preference shares of £10s. each	1 1 0
Ordinary shares of £10s. each	3 11 9
United Automobile Services Limited	
7 per cent. cumulative preference shares of £1 each	1 10 0
Ordinary shares of £1 each	5 0 3
United Counties Omnibus Co. Ltd.	
Ordinary shares of £1 each	3 15 9
Westcliff-on-Sea Motor Services Limited	
Ordinary shares of £1 each	3 13 6
West Yorkshire Road Car Co. Ltd.	
6½ per cent. cumulative preference shares of £1 each	1 9 6
Ordinary shares of £1 each	4 12 3
Wiltshire & Dorset Motor Services Limited	
Ordinary shares of £1 each	10 17 6

An offer is, therefore, being made at the above prices for the shares in the companies, and the price will be settled in British Transport 3 per cent. Guaranteed Stock 1968/73, valued at £101 per cent., which was the value put on the stock issued to Thomas Tilling Limited. Circular letters embodying the report are being posted to all the shareholders this week.

Railway Students' Association Dinner

The Railway Students' Association, London School of Economics & Political Science, first post-war annual dinner was held at the Charing Cross Hotel, London, on Tuesday, March 1. Among those present were:—

Messrs. J. Benstead, Member, British Transport Commission; J. H. Brebner, Chief Public Relations & Publicity Officer, British Transport Commission; A. E. H. Brown, Chief Docks Manager, South Wales, Docks & Inland Waterways Executive; B. W. C. Cooke, Assistant Editor, *The Railway Gazette*; D. H. Coombs, Vice-Chairman of the Committee, R.S.A.; C. Furber, Commercial Superintendent, Western Region; L. C. Hawkins, Member, London Transport Executive; Sir Cyril Hurcomb, Chairman, British Transport Commission and President, Railway Students' Association; Mr. D. R. Lamb, President, Institute of Transport; Lord Latham, Chairman, London Transport Executive; Messrs. A. R. d'A. Mount, Chief Financial Officer, Hotels Executive; L. W. Orchard, Chairman of Committee, Railway Students' Association; G. F. Stedman, Under-Secretary, Ministry of Transport; J. C. L. Train, Member, Railway Executive.

Mr. L. W. Orchard, who proposed the toast: "Our Guests," said that the theme of "The Value of Adult Education in Transport" had been chosen for the evening.

A great number of people thought of education as a course of study for the very young; he submitted that education today was just as vital to adults, although perhaps from a different angle, as to the young, and that one who continued to study throughout his career remained a student, regardless of the measure of his achievements. As far as the very young were concerned, the type of education required was that which would awaken their intelligence and develop their faculties, but in this Association they were concerned with adults requiring a much higher standard of education. They encouraged thought and endeavoured to develop the critical and analytical faculties, so that their students could bring such faculties into play in the consideration of the problems they encountered.

The service of transport was not stationary, it was always moving from one position, or set of circumstances, to another, and facts changed with circumstances. Facts, therefore, had only a short life and evanescent value; unless this was appreciated, standards became fixed and adaptability diminished. Similar remarks applied, to some extent, to methods; they too should always be under consideration for improvement. They endeavoured to avoid becoming static, or stereotyped, by a continuous process of revision.

Lord Latham, in responding to the toast on behalf of the guests, said he had a considerable interest in railways, as Chairman of the London Transport Executive. He paid special tribute to Sir Cyril Hurcomb and mentioned his interest in the Association.

Mr. G. F. Stedman, proposing the toast: "The President," referred to Sir Cyril Hurcomb's work at the Ministry of Transport. Mr. Stedman congratulated him on becoming President of the R.S.A. and the Railway Students' Association on the honour of having him as its President.

Sir Cyril Hurcomb, in response, said that besides their educational activities on behalf of their own members, the Railway Students' Association were directly and indirectly performing a most useful additional function in helping to inform the public of the facts concerning nationalised

transport. He declared his interest in looking to the Association, as a body of persons, many of them already well experienced in transport matters, who would help to spread knowledge of the realities of the present transport situation, with particular reference to the railways.

The presidential address, which he had delivered last October, had covered a good deal of ground and had been given a wide circulation. To the extent that it had performed a useful service in describing the machinery of the Commission and its five Executives, and had set out the fundamental problems which the Commission was called upon to solve, he hoped it would be followed by other papers from those responsible for executing the measures required to give effect to the nationalisation of all forms of transport. In this way, the collected papers of the Association in future years would form an interesting historical record of an exercise in practical economics which no other nation had attempted on the present scale.

It was necessary to create a new outlook among all members of the Commission's combined staffs, from the most senior to the most junior. All were now public servants in a special sense, and while their loyalties to the particular undertakings for which they had worked represented one of the most valuable assets taken over, a new kind of loyalty would have to be fostered and a standard of service accepted, which would reflect a combined responsibility to make the national transport system successful. The knowledge of all that was implied by transport nationalisation could not be imparted only through the staff journals, through posters and film shows, although all these were important. In addition to these means of fostering a more instructed point of view among all personnel, it was very important that the educational work of the Association, being by its nature more applied and systematic, should continue to expand, and to inculcate a more widespread interest and a greater zest for the multiple tasks which added together represented the successful conduct of the great undertaking in which they were engaged.

Mr. J. Benstead, who proposed the toast "The Railway Students' Association," said the R.S.A. had been wise in not fixing an age limit for its students, as the experience and sagacity of the elders would help the younger members. The work of the Association was purely voluntary, and he thought that such a basis should be the foundation of any future educational schemes; anything worth having was worth working for. The first thing to study was how to get traffic and this should be followed by the important subject of how to integrate road and rail transport. There was no need for chromium-plated brittle efficiency on the railways, the organisation was not an army of robots, and efficiency had to be married to happiness. The staffs of the various Executives must not be considered in water-tight compartments, or the purpose of the Transport Act would be defeated.

Mr. A. E. H. Brown, in response, stressed the remarkable post-war recovery of the R.S.A. and said the high membership reflected railwaymen's interest in their job. The men had to be properly trained—told what to do and how to do it—and he thought there always was room for associations like the R.S.A. in any future educational plans.

Notes and News

Institution of Railway Signal Engineers.—The annual general meeting of the Institution of Railway Signal Engineers will be held at the Institution of Electrical Engineers, Savoy Place, London, W.C.2, on Wednesday, March 16, at 6 p.m.

Railway Draughtsman Required.—Samuel Osborn & Co. Ltd., of Sheffield, have a vacancy for a draughtsman, with some experience in tramway, or railway permanent way, switches, crossings, and layouts. See Official Notices on page 251.

Agreed Charges.—Applications for the approval of 79 further agreed charges under the provisions of section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Transport Tribunal. Notices of objection must be filed on or before March 15 next.

Accountant Required.—Applications from qualified candidates are invited for the post of accountant, required by the Government of the Gold Coast for the railway department, for two tours of 18 to 24 months, with prospect of permanent and pensionable employment. See Official Notices on page 251.

Institution of Locomotive Engineers.—Mr. I. C. Forsyth will read a paper entitled: "Some Developments in Locomotive Workshop Practice, 1939-48," before the Institution of Locomotive Engineers on March 16. The meeting will be held at the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 5.30 p.m.

Norwegian Travel Delegation.—Fourteen of Norway's leading hoteliers and travel experts arrived in London recently, to contact travel agents and to study facilities for Norwegian tourists. The Travel Association (Tourist Division of the British Tourist & Holidays Board) states that last year more than 13,000 Norwegians came to Great Britain, an increase of 3,000 on the previous year.

Timber Trades Conference in London.—As a result of the recent publication of a memorandum to the Board of Trade on the economics of timber substitution, the Timber Development Association is holding a conference in London on March 8. Chairman of the Conference, which will open at the Church House, Westminster, S.W.1, at 10.30 a.m., will be the Earl of Dunmore, President of the Association. Delegates comprising representatives of the timber consuming industries, professional institutions, trade unions, etc., will examine the effects of the present timber shortage over a broad industrial field and the means to be adopted to overcome them.

Contract for New Tunnel at Woodhead.—A contract has been let by British Railways to Balfour Beatty & Co. Ltd., 66, Queen Street, London, E.C.4, for the construction of a new tunnel at Woodhead. This new double-line tunnel will have its western portal in Cheshire and its eastern in the West Riding of Yorkshire. It will measure 27 ft. wide at the waist, and 21 ft. 4 in. to the soffit above ballast level, and will be 3 miles 3 chains in length. The new tunnel will be situated 100 ft. south of the centre line of the existing westbound tunnel and will be straight throughout except for a 40-chain curve 600 ft. in length at the west end. The approach works include a new bridge over the River Etherow at Woodhead and a new span under Windledon Lane at Dungford Bridge. The estimated cost of the

main contract exceeds £2,000,000, and the total cost of the scheme, including subsidiary contracts, signalling, and permanent way, will amount to about £2,800,000. It is hoped to complete the work in 3½ years. Sir William Halcrow & Partners, Consulting Engineers, are acting on behalf of the Railway Executive in the design and supervision of the execution of this work.

Egyptian Locomotive Orders.—A Reuters message from Cairo states that the North British Locomotive Company has successfully tendered to supply the Egyptian State Railways with 18 locomotives for £E450,157. Delivery must be made within 18 months. A French tender to supply ten locomotives for £E241,000 was also accepted.

Renaming of Stations, L.M.R.—On March 1, the former L.M.S.R. station at St. Helens, Lancashire, was renamed St. Helens (Shaw Street), and the goods station of the former L.N.E.R. became St. Helens Central. In February, shortly before the London Tilbury & Southend section was transferred to the Eastern Region, East Tilbury Halt was designated East Tilbury.

English Electric Company Dividend.—The board of The English Electric Co. Ltd. is to recommend a final dividend on the ordinary stock for the year ended December 25, 1948, of 6 per cent., less tax, payable on March 31, making 10 per cent., less tax, for the year. The profit was £535,027 after crediting non-recurring revenue of £55,513 and providing for taxation and £396,289 for depreciation. This compares with £273,584, after providing for taxation and £245,135 for depreciation, in 1947.

Easter Sailing Tickets for Irish Services.—Easter sailing tickets will be required by all passengers, including children, travelling to Ireland on the Fishguard—Rossall and Fishguard—Waterford routes on April 8, 11, and 13, and from Ireland on April 19, 21, and 23. Applications should be made to the Central Enquiry Bureau, Paddington Station, London, for sailing tickets for the outward journey, and to the Agent for British Railways at Rossall or Waterford for the return journey. Passengers must be in possession of a passport, travel permit card, or other authorised travel document, and the number on this document must be quoted when applying for a sailing ticket.

G.W.R. (London) Operatic Society.—Last week at the Scala Theatre the Great Western Railway (London) Operatic Society gave four performances of "The New Moon," Romberg's musical play set in eighteenth century Louisiana. It was an ambitious, but completely successful production, and Mr. Frederick G. Lloyd, producer, Mr. Stanley Cheffins, honorary musical director and conductor, and the orchestra, principals, dancers, and chorus numbering 114, entirely composed of Western Region staff, are all to be congratulated. Miss Joyce Hewitt played Marianne Beaunois, with Mr. Ronald Ratcliffe in the comedy rôle of Alexander. Last Friday was "guest night" and the audience included Lord Portal, President, and Mr. K. W. C. Grand, Chairman of the G.W.R. Operatic Society, Mr. Gilbert Matthews, Operating Superintendent, Mr. C. Furber, Commercial Superintendent, Mr. A. S. Quartermaine, Chief Engineer, Mr. Cyril Dashwood, Chief Accountant, and many other Western Region officers. Guests in-

cluded General Sir Daryl Watson, Member, Railway Executive, Sir Alan Mount, Chief Inspecting Officer of Railways, Ministry of Transport, Mr. G. L. Darbyshire, C.R.O., London Midland Region, and Mr. C. K. Bird, C.R.O., Eastern Region.

The Midland Railway Company of Western Australia Limited.—The directors have decided to pay interest of 4 per cent. on the second mortgage cumulative income debenture stock in respect of the year ended December 31, 1945, subject to tax deduction. It was resolved to pay the interest on March 30 and to close the register of this stock from March 16 to 29, both days inclusive.

Western Region Boxing Semi-Finals and Finals.—The Western Region semi-finals and finals of British Railways Inter-Regional Amateur Boxing Tournament were staged at Southall Community Centre on February 22 at 7 p.m. The champions in each weight will box in the Inter-Regional quarter finals. The Inter-Regional semi-finals and finals will be contested at Seymour Hall, London, on Tuesday, March 29.

London Sales Office for Rubery, Owen & Company.—New offices have been opened at Kent House, Market Place, Oxford Circus, London, W.1, for the London sales staff of Rubery, Owen & Co. Ltd., Darlaston, and for the sales staff of certain associated companies. The export staff also will be operating from this office. Mr. S. Gordon Sloan, previously London Sales Manager of the company, has been appointed General Sales Manager, and is now operating from Darlaston. Mr. G. E. Montague succeeds him as London Manager.

Londonderry & Lough Swilly Railway Company.—The statement of accounts for the year ended December 31, 1948, reveals a loss on railway operations of £4,246, with gross receipts of £39,695 and expenditure £43,941. Road transport services, with gross receipts of £174,393 and expenditure of £159,398, made a surplus of £14,995, and steamboats a surplus of £87. Total receipts were £11,335 (as compared with £16,513 for the previous year), which, when the balance from the last account is added and adjustments made for interest, taxation, etc., leaves an available balance of £8,069. The directors recommend dividends of 5 per cent. on the preference stock and 5 per cent. on the ordinary stock, less income tax.

Standardisation as an Aid to Industrial Production.—Mr. Roger Duncalfe, Chairman of the General Council of the British Standards Institution, welcomed Mr. Harold Wilson, President of the Board of Trade, and Mr. G. R. Strauss, Minister of Supply, at a dinner at the Dorchester Hotel on February 23. Mr. Wilson said that the Board of Trade had taken an active interest in the work of the Institution for many years, and it was the desire of the Government to see that the position of the B.S.I. was strengthened, and that its activities should continue to grow at an even greater rate. Mr. Strauss said he had set up a committee which was meeting representatives of the national bodies and the various branches of the engineering industry and discussing the standardisation problems with them, and he expected that to give effect to the recommendations of that committee would result in a great extension of the work of the B.S.I. Sir Frederick Bain, President of the Federation of British Industries, said that he and those associated with him

OFFICIAL NOTICES

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

DRAUGHTSMAN, preferably with some experience in tramway or railway permanent way switches, crossings, and layouts. Apply in writing, stating age, experience, and salary required, to the SECRETARY, SAMUEL OSBORN & CO. LTD., P.O. Box No. 1, Sheffield, 3.

THE FIRST PASSENGER RAILWAY. By Charles E. Lee. A history of the Swansea & Mumbles Railway, which extends over 136 years. Cloth, 8½ in. by 5½ in. 91 pp. Illustrated. 5s. By post 5s. 3d.

THE RAILWAY HANDBOOK provides the railway student with a collection of useful statistics and information relating to the railways of Great Britain and Ireland. In addition, in matters of international interest, such as speed and electrification progress, the book extends its scope to cover the whole world in order to present a complete picture of these increasingly-important developments. 120 pp. Dv. 8vo. Paper covers. Price 5s. By post 5s. 3d

in the development of large business undertakings were in agreement with the view that standardisation work should be concentrated under one national body which had the confidence of both industry and the Government. Sir William Stanier, Chairman of the Engineering Divisional Council of the B.S.I., said that he could fully support the views expressed by both Ministers that there was still a large field of work which the B.S.I. could effectively carry out, if the means were placed at its disposal.

Welding Conference.—The Institute of Welding and the British Welding Research Association have organised a conference on: "Saving of Steel and Manpower by Welding," which will be held at Ashorne Hill, near Leamington Spa, from March 22 to 25. Session four of the conference, on March 24, from 9.30 a.m. to 12.30 p.m., will be concerned with the subject: "Welding as Applied to Railways and Rolling Stock," when Mr. O. V. Bulleid, Chief Mechanical Engineer, British Railways, Southern Region, and Vice-President of the Institute of Welding, will be in the Chair. At this session Messrs. G. Foster and B. R. Byrne will read papers on the above subject and Mr. N. W. Swinnerton will deal with: "Welding on British Railways—Trackwork and Structures"; the rapporteur will be Mr. R. E. Weddell, of W. G. Allen & Sons (Tipton) Ltd.

Indian Railway Budget.—The Railway Budget presented to Parliament disclosed a Rs. 15,83,00,000 surplus for the current year and a Rs. 9,44,00,000 surplus for 1949-50. From the current year's surplus Rs. 7,34,00,000 has been allocated to general revenue, Rs. 84,00,000 to the betterment fund for passengers' amenities, and the balance to the depreciation fund, which with the current year's contribution will stand at Rs. 91,95,000. Of next year's surplus, Rs. 4,72,000 will be allocated to general revenue and the balance to depreciation fund. Expenditure in 1949-50 of Rs. 64,00,00,000 includes provision of Rs. 4,71,00,000 for new construction, including a direct rail link with Assam, Rs. 36,15,00,000 for rolling stock and new locomotives, Rs. 4,00,00,000 for machinery, and Rs. 5,50,00,000 for a locomotive building project. No changes in rates or fares are proposed. The Railway

Crown Agents for the Colonies
APPLICATIONS from qualified candidates are invited for the following post:

ACCOUNTANT required by the Government of the Gold Coast for the Railway Department for two tours of 18 to 24 months, with prospect of permanent and pensionable employment. Salary and overseas pay between £600 and £1,200 a year, according to age, experience and war service. Outfit allowance £60. Free passages. Candidates age 24 to 35 years must hold bookkeeping and final accounting certificates, be capable of taking charge of a section of a railway accounts office and instructing staff in new or amended simple accounting procedure. Experience in railway accounts, though preferred, is not essential. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting M/N/17137 (3E) on both letter and envelope.

SECTIONED PERSPECTIVE VIEW OF LOCOMOTIVE FRONT END. A notable drawing of L.M.S.R. class "7P" 4-6-2 locomotive of the latest type. Reprinted from *The Railway Gazette*, June 15, 1945. Price 2s. 6d. Post free 2s. 8d.

RAILWAY MAINTENANCE PROBLEMS. By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth, 8½ in. by 5½ in. 82 pp. Diagrams. 5s. By post 5s. 3d.

WE require a Secondhand Locomotive Boiler in insurable condition for 150 lbs. per sq. in. Maximum sizes: 8 ft. 7½ in. long, 2 ft. 7 in. dia. o.d. barrel. Firebox 2 ft. 6 in. × 3 ft. 4 in. wide o.d. Particulars to CHIEF ENGINEER AND GENERAL MANAGER, SOUTHPORT CORPORATION GAS DEPARTMENT, 91, Eastbank Street, Southport.

TRAFFIC CONTROL ON THE L.M.S.R. Coordination of operating arrangements as a result of grouping.—Central, Divisional, and District Control—Outline of unified methods adopted—Organisation and working—Control telephone circuits—Daily telephonic conferences. Paper, 12 in. by 9 in. 20 pp. Illustrated. 5s. By post 5s. 2d.

INTERNATIONAL RAILWAY ASSOCIATIONS. Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2s. By post 2s. 2d.

RAILWAY AMALGAMATION IN GREAT BRITAIN. By W. E. Simnett. An authoritative account of the course of railway amalgamation in Great Britain up to the end of 1923. Cloth, 8½ in. by 5½ in. 276 pp. 15s. By post 15s. 7d.

THE WORK OF THE RAILWAY CLEARING HOUSE, 1842-1942. An account of the development and extent of the activities of this famous British railway institution. Paper, 9½ in. by 6 in. 24 pp. Illustrations. 2s. 6d. By post 2s. 8d.

Minister has announced that plans are under examination for the establishment of a central coach manufacturing workshop for the construction of all-steel coaches in India.

Polish Railways Increase Rolling Stock.—Polish railways added 15,000 goods wagons and passenger coaches to their rolling stock last year and plan to add the same number this year.

Part Contract for Cosmos and Metrovick Electric Lamps.—A part contract for Cosmos and Metrovick electric lamps over the period January 1 to June 30, 1949, has been placed with Metropolitan-Vickers Electrical Co. Ltd., London, W.C.2, by British Railways, Western Region.

Manila Railway Co. (1906) Ltd.—The directors have announced that, as the position of the company has not changed materially during the past three years, and it is not possible to resume payment of interest on the "A" and "B" debenture bonds and debenture stocks, it is intended to introduce shortly a new scheme which will provide *inter alia* for a further moratorium period. The scheme of 1946 provided for a moratorium until January 14, 1947, with power for the Stockholders' Committee to extend the period. The Stockholders' Committee twice has extended the moratorium period, though it has no power to grant any further extension beyond January 14, 1949.

Polhill Tunnel Track Renewal.—Mr. F. E. Campion, Assistant Civil Engineer, Southern Region, was in the Chair at a meeting of British Railways, Southern Region, Lecture & Debating Society, on February 24, when Mr. A. H. Cantrell, London East Divisional Engineer, read a paper on: "Track and Ballast Renewal in Polhill Tunnel." In a comprehensive paper, illustrated by lantern slides, Mr. Cantrell described in full the preparatory work involved in planning this operation in collaboration with the operating department, before going on to describe the actual renewal. The paper was followed by a new film on the pre-assembled method of track renewal, recently made by the Southern Region Film Unit. A vote of thanks was proposed by Mr. N. L. Collins, Assistant London East Divisional Superintendent, Orpington, who

thanked Mr. Cantrell for his remarks in reference to the operating department, whose co-operation was inspired by its complete confidence in the civil engineer's department to finish the job in the time allotted. This was seconded by Mr. I. C. Marshall, Outdoor Assistant to the Superintendent of Operation and Vice-Chairman of the Society.

Westinghouse Brake & Signal Co. Ltd.—An extraordinary general meeting of the Westinghouse Brake & Signal Co. Ltd. is called for March 15, to consider resolutions that the capital be increased to £1,500,000 by the creation of 300,000 new shares of £1 each and that new Articles of Association be adopted.

Closing of Stations, L.M.R.—The passenger service on the Alexandra Dock branch, Liverpool, which was suspended on May 31, 1948, has been withdrawn permanently. It has been decided, also, to close permanently the halts at Kempston & Elstow, Wootton Broadmead, and Husborne Crawley (between Bletchley and Bedford), from which services were withdrawn on May 5, 1941. Boars Head Station, near Wigan, on the main line from Euston to Carlisle, was closed to all traffic on January 31, and the stations at Edwalton, Plumtree, and Widmerpool (between Nottingham and Melton Mowbray) were closed to passengers on February 28. Edwalton had been closed temporarily since July 28, 1941.

A Century of Dock and Harbour Developments.—On February 24, at the Brighton Technical College, Mr. M. G. J. McHaffie, formerly Docks Engineer, Southern Railway, delivered a most instructive paper to the local branch of the Institution of Civil Engineers. He described the principal features and developments in dock and harbour work during the past century. Among them were: the growth in size of successively-constructed docks at Southampton; developments in the design of dock walls; various features of dredging; the vulnerability of timber in salt water to marine borer insects; the necessity for shaping and boring all timbers, liable to marine borers' attacks before they are incised and pressure treated; pre-stressed concrete work; various modern cements; up-to-date facilities for dealing with passengers and their

luggage, when embarking and disembarking at large ports, notably those in France and, as now being provided, at Southampton. The lecture was illustrated by a number of lantern slides, many of them coloured.

Canadian Export Market.—A report entitled: "Exports to Canada," has been issued by the United Kingdom Engineering Mission to Canada, which was appointed to investigate market possibilities for certain classes of engineering equipment and to advise on the most suitable methods for securing a greater volume of exports to that country. It is stated that there is an important, stable, and growing market in Canada, though buying centres are far apart and the Canadian engineering industry is strong and versatile; skill and energy would be needed to compete with the United States. The report recommends that delivery promises for Canadian orders in hand should be kept and, if necessary, improved; also that immediate and special attention be given to inquiries received from Canada. A suggestion is made that U.K. engineering equipment manufacturers should visit Canada this Spring to explore the market and arrange for effective representation. Copies of the report are obtainable from H.M. Stationery Office, York House, Kingsway, London, W.C.2, price 1s.

Forthcoming Meetings

March 7 (Mon.).—Institute of Transport, Metropolitan Section, at Livingstone House, Broadway, London, S.W.1, at 5.30 for 6 p.m. "Traders and the Transport Act, 1947," by Mr. A. G. Marsden.

March 8 (Tue.).—Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 6 p.m. Automobile Division, general meeting, in association with the Internal Combustion Engine Group: "Sulphur in Diesel Fuels," by Messrs. J. J. Broeze and A. Wilson.

March 8 (Tue.).—Institute of Traffic Administration, Manchester Centre, at the Grand Hotel, Manchester, at 7 p.m. "Carriage of Goods by Sea," by Mr. N. P. Brooke.

March 8 (Tue.).—Institute of Transport, Yorkshire Section, at the Great Northern Station Hotel, Leeds, at 6.30 p.m. "The Transport Act, 1947," by Mr. M. A. Cameron, Principal Traffic Officer, British Transport Commission.

March 9 (Wed.).—Railway Students' Association, London School of Economics & Political Science, Houghton Street, Aldwych, at 6 p.m. "Hotels and their Relationship to Transport" by Mr. F. G. Hole, Member, Hotels Executive.

March 9 (Wed.).—Newcomen Society, at the Institution of Civil Engineers, Great George Street, London, S.W.1, at 5.30 p.m. "Colliery Tramroads in Northumberland," by Mr. Charles E. Lee, Member of Council, Newcomen Society.

March 11 (Fri.).—Institute of Transport, South Wales & Monmouthshire Section, at the South Wales Institute of Engineers, Cardiff, at 7.15 p.m. "Ports and Shipping," by Mr. L. J. Callaghan, Parliamentary Secretary to the Ministry of Transport.

March 12 (Sat.).—Permanent Way Institution, Manchester & Liverpool Section, at St. John's Ambulance Brigade H.Q., Chapel Walk, Preston, at 2.30 p.m. "Hallade Realignment of Curves," by Mr. I. P. Strachan.

Railway Stock Market

Business in stock markets has remained at a low ebb with prices reacting further in the absence of demand. Chemical and other shares were marked down on reports that the Labour Party second five-year plan may include proposals for the nationalisation of the chemical and other industries. It is now assumed that dividend limitation will remain in force for another year and that the level of Government expenditure and the larger sums necessary for defence will mean little tax relief in the Budget this year apart from purchase tax reduction and minor changes in the profits and bonus taxes.

There were big upward adjustments in prices of road transport shares as a result of the compensation decision in respect of minority shareholders in the Tilling group. B.E.T. deferred stock advanced strongly and shares of transport companies in this group also moved sharply in favour of holders on the assumption that the Tilling compensation will probably be taken as a basis for any other transport acquisitions by British Transport.

There was less activity in foreign rails and chief attention centred on the Brazilian group. Prices continued to fluctuate from day to day in the absence of any fresh rumours of take-over moves. Great Western of Brazil, after earlier gains, came back to 113s. 9d. Leopoldina was 9s, the preference stock 32, the 4 per cent. debentures firm at 85s, the 6½ per cent. debentures 106, and Leopoldina Terminal 5 per cent. debentures 83½. Leopoldina Terminal shares were again 1s. 9d. The view appears to be growing that in the event of take-over developments the debentures are likely to offer better prospects of appreciation than the preference and other junior stocks. San Paulo eased to 153. Manila Railway "A" debentures at 86 held only part of an earlier improvement and the 5 per cent. preference shares receded to 8s. 6d.

Antofagasta issues were relatively steady, the ordinary being 9½ and the preference stock 59, while elsewhere Mexican Railway 6 per cent. debentures were 86½ and United of Havana 1906 debentures 13. Buenos Ayres Central 4½ per cent. debentures have marked 38 and the 5½ per cent. second debentures 18½. Taltal shares changed hands around 14s. 9d. and Nitrate Rails were 67s. 6d. Beira Rails were 46s. 3d. and Canadian Pacifics 20sxd.

Tillings, after publication of the accounts, came back to 26s. 3d. on doubts as to whether the company in its present form will be able to maintain dividends at 10 per cent. Prices were marked up all round to accord with the terms of the recent offer. Wilts & Dorset were raised 52s. 6d. to £10½, and United Automobiles 6s. 3d. to 96s. 3d., while Tilling Motor Services gained 12s. at 70s., and National Omnibus 8s. 6d. at 83s. 6d., and preference shares also were adjusted upwards. Shares of companies outside the Tilling group participated in the upward movement. B.E.T. deferred jumped £45 to £1,910, Aldershot & District put on 6s. 3d. at 152s. 6d., Southdown 7s. 6d., at 162s. 6d., and Devon Bus 3s. 9d. at 193s. 9d.

Iron and steel shares have been relatively steady although Stewarts and Lloyds eased to 57s. 1½d., Staveley were 83s. 9d., and Sheepbridge 63s. 9d. Shares of locomotive building and engineering companies moved moderately lower. North British Locomotive were 23s., Beyer Peacock 23s. 7½d., Vulcan Foundry 25s. 3d., and Wagon Repairs 5s. shares 21s. 3d., while Gloucester Wagon weakened to 56s. 3d. Charles Roberts at 7½d. have been steady on market estimates of the capital return expected. Tarmac shares were 71s. 6d. on expectations of good financial results and hopes of news as to the compensation for railway wagons. T. W. Ward changed hands slightly under 70s. and Babcock & Wilcox were 73s. 9d. after being over 74s.

Traffic Table of Overseas and Foreign Railways

Railways	Miles open	Week ended	Traffics for week		No. of week	Aggregate traffics to date		
			Total this year	inc. or dec. compared with 1947/48		Total	1948-9	
						1948-9	Increase or decrease	
South & Central America								
Antofagasta	811	20.2.49	£62,880	+ 4,430	7	£512,390	+ 110,980	
Bolivia	174	July, 1948	£28,960	- 869,357	30	£471,287	- \$301,893	
Brazil								
Cent. Uruguay	970	6.1.48	32,712	+ 2,978	18	593,105	- 7,652	
Costa Rica	281	31.1.49	35,772	- 3,648	31	250,029	+ 12,870	
Doradas	70	Dec. 1948	32,515	+ 6,915	52	338,423	+ 12,377	
G.W. of Brazil	1,040	19.2.49	41,800	+ 1,200	7	297,400	+ 6,000	
Inter. Ctl. Amer.	794	Dec., 1948	£1,168,700	+ 845,700	52	£13,333,950	+ \$257,513	
La Guaira	223	Jan., 1949	£10,295	+ 832,218	4	£10,296	+ \$32,218	
Leopoldina	1,920	19.2.49	44,070	- 10,560	7	342,329	+ 79,711	
Midland Uruguay	319	Sept., 1948	19,608	+ 3,123	12	67,355	+ 16,721	
Nitrate	382	15.2.49	16,886	+ 7,133	7	47,139	+ 14,283	
N.W. of Uruguay	113	Sept., 1948	5,686	+ 1,213	12	16,335	+ 1,989	
Paraguay Cent.	274	18.2.49	£110,936	+ £42,996	33	£3,470,666	+ £1,289,628	
Pero Corp.	1,059	Jan., 1949	223,166	+ 42,592	31	1,383,296	+ 176,604	
Salvador	100	31.12.48	£267,000	+ c16,000	26	£776,000	+ £53,400	
San Paulo	153½	—	—	—	—	—	—	
Taital	156	Jan., 1949	9,915	+ 1,045	31	57,335	+ 7,725	
United of Havana	1,301	19.2.49	£431,920	+ £89,968	33	£7,709,199	+ \$2,911,454	
Uruguay Northern	73	Sept., 1948	1,072	+ 52	12	3,308	+ 111	
Canada								
Canadian National	23,473	Jan., 1949	9,327,250	+ 826,750	4	9,327,250	+ 826,750	
Canadian Pacific	17,037	Dec., 1948	7,769,250	+ 618,000	52	88,812,250	+ 9,165,750	
Various								
Barsi Light*	202	31.1.49	25,642	+ 2,497	44	272,310	+ 22,852	
Beira	204	Nov., 1948	128,810	+ 18,938	9	255,148	+ 29,260	
Egyptian Delta	607	20.1.49	18,286	+ 2,075	42	596,981	+ 110,321	
Gold Coast	536	Jan., 1949	243,578	+ 28,590	44	2,145,956	+ 538,937	
Manila	—	—	—	—	—	—	—	
Mid. of W. Australia	277	Dec., 1948	32,105	+ 4,664	26	175,849	+ 40,349	
Nigeria	1,900	Nov., 1948	495,323	+ 70,029	33	3,647,148	+ 716,766	
Rhodesia	2,445	Sept., 1947	643,980	+ 102,833	52	6,787,603	+ 612,938	
South Africa	13,347	5.2.49	1,406,569	+ 29,472	45	59,929,783	+ 3,631,860	
Victoria	4,774	Oct., 1948	1,412,748	+ 36,618	18	—	—	

*Receipts are calculated @ 1s. 6d. to the rupee